

# Libby Railyard Response Action 2004 Draft Construction Completion Report

Libby Railyard Libby, Montana

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## The Burlington Northern and Santa Fe Railway Company

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**Kennedy/Jenks Consultants** 

## LIBBY RAILYARD RESPONSE ACTION 2004 DRAFT CONSTRUCTION COMPLETION REPORT BNSF Railyard, Libby, Montana

#### **DRAFT**

#### Prepared for

#### THE BURLINGTON NORTHERN AND SANTA FE RAILWAY COMPANY

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## THE BURLINGTON NORTHERN AND SANTA FE RAILWAY COMPANY LIBBY RAILYARD RESPONSE ACTION 2004 DRAFT CONSTRUCTION COMPLETION REPORT

#### 1.0 INTRODUCTION

This construction completion report summarizes the Libby Railyard Response Action 2004 (Response Action), as supported by record drawing details, for the abatement of soil containing asbestos fibers in the form of tremolite/actinolite (Libby amphibole) and visibly identified hydrated biotite (an indicator of Libby amphibole) identified along portions of the rail lines at the Libby, Montana railyard, herein referred to as the Site. This Response Action was conducted to comply with an Agreed Order on Consent (AOC) between The Burlington Northern and Santa Fe Railway Company (BNSF) and the United Stated Environmental Protection Agency, Region VIII (EPA), which was executed by BNSF on 17 April 2003.

The Site is owned and operated by BNSF. The primary objectives of the Response Action were to remove or cap surface soils at the Libby Yard potentially impacted by Libby amphibole. The mitigation activities were conducted in accordance with the Revised Response Action Work Plan (Kennedy/Jenks Consultants, August 2004) and modifications based on supplemental soil sampling data collected during 2004 construction activities. EPA approved The Revised Response Action Work Plan as final on 1 September 2004.

The Response Action activities performed at specific tracks within the Libby Yard were based on soil sample analysis conducted by EMR Incorporated (EMR). Based upon the sampling data, it was decided that a specific portion of the soils within the Site would undergo excavation to remove and dispose of soils containing detectable Libby amphibole, and other specific portions of the Site would be capped in place (without excavation) to prevent future Libby amphibole exposure. Because the Site is an active rail facility with switches and sidings still used by BNSF, track reconstruction is planned for up to two tracks along portions of the excavation zone.

Railroad tracks within the zone of excavation and the zones of capping were removed to allow access to soil potentially containing Libby amphibole or visible hydrated biotite beneath the track structures. In the zones scheduled for excavation, soil potentially containing Libby amphibole or hydrated biotite was excavated, and underlying soil was sampled concurrently to evaluate whether detectable Libby amphibole remained (clearance samples). Excavation proceeded until laboratory results indicated that Libby amphibole fibers were not detected in the soil samples (generally no more than 29 to 35 inches below the top of the adjacent ties comprising the existing BNSF main line) or to a depth of at least 4 feet. At several locations, excavation reached a depth greater than 4 feet, but clearance samples indicated detectable Libby amphibole had been removed. At one small location, excavation reached at least 6 feet, but clearance was not achieved, as described below. In the other portions of the Site, soil containing Libby amphibole or hydrated biotite was capped in place.

DRAFT LIBBY The removed rails were decontaminated onsite by pressure washing. The decontaminated rails were removed for re-use or scrap. The removed railroad ties were decontaminated by first pressure washing and then cleaning through a conveyor system of high-pressure nozzles inside a specially designed railroad tie washer. The decontaminated ties will be disposed at the Montana Waste Systems Landfill in Great Falls, Montana.

Kennedy/Jenks Consultants prepared the Response Action design and provided construction observation services on behalf of BNSF. EMR performed asbestos oversight, sampling, personal, and perimeter monitoring on behalf of BNSF. EMR's oversight included air monitoring, visual inspection, confirmation soil sampling, and monitoring for visible dust or particle emissions. In addition, EMR completed daily soil removal reports in conjunction with Kennedy/Jenks Consultants. The Contractor (Envirocon) prepared daily safety reports in conjunction with Kennedy/Jenks Consultants. BNSF will be responsible for final track reconstruction, which is not part of the Response Action elements needed for compliance with the AOC. Project reporting requirements, including record drawings (sometimes called "as-built" drawings), construction quality assurance/quality control (QA/QC), material submittals, health and safety plan, and a final inspection report are provided in the appendices of this report.

#### 1.1 PURPOSE AND OBJECTIVES

The purpose of the Response Action at the Libby Yard was to comply with the work requirements of the AOC.

The Response Action objectives included the following:

- Remove soil potentially containing Libby amphibole from areas of the railyard that will continue to contain active tracks in the future.
- Cap soil potentially containing Libby amphibole in the areas of the railyard that are not likely to contain active tracks in the future.
- Decontaminate and recycle or dispose of rail, ties, and other track materials that will be demolished to allow removal or capping of soil in areas of the railyard potentially containing Libby amphibole.
- Provide a final subgrade elevation in the removal areas, with appropriate thickness of sub-ballast material beneath the final subgrade, to permit BNSF to reconstruct track consistent with current and foreseeable future operational needs.

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#### 1.2 SITE LOCATION

The Site is located within the town of Libby, Montana, as shown on Record Drawing Sheet 1 in Appendix A-1. The Response Action was conducted on BNSF property located north of the BNSF main line track. The eastern limit of Response Action activities is the switch located between the BNSF main line and the railyard at the eastern end of the yard. The western limit of Response Action activities is the switch located between the BNSF passing siding and the railyard at the western end of the yard. Response Actions were also conducted on the former W. R. Grace facility (a 10-foot-wide strip of property belonging to the City of Libby that runs east/west immediately north of the Site). This 10-foot strip is located west of the Highway 37 overpass and north of the BNSF property line. In addition, an unused scale house was mitigated, demolished, and disposed as potential asbestos-containing material (ACM), and a concrete/steel freight car scale was excavated and removed; these structures were located on Track 4 east of Highway 37, as shown on Record Drawing Sheet 4A in Appendix A-1.

#### 1.3 RELEVANT DESIGN DOCUMENTS

The following documents provide the basis for design and construction of the Libby Railyard Response Action performed in 2004:

The following documents provide the basis for design and construction of the Libby Railyard Response Action performed in 2004:

- Evaluation of Conceptual Response Options dated June 2004, prepared for BNSF by Kennedy/Jenks Consultants.
- Project Manual, The Burlington Northern and Santa Fe Railway Company, Libby Rail Yard Asbestiform Fiber Removal, Libby, Montana (project construction specifications) dated July 2004, prepared for BNSF by Kennedy/Jenks Consultants, which includes Project Specification, BNSF Libby Railyard Hydrated Biotite Removal, Libby, Montana dated July 2004, prepared for BNSF by EMR.
- Burlington Northern and Santa Fe Railway Company, Libby Railyard, Response Action (design drawings) by Kennedy/Jenks Consultants dated 26 July 2004, prepared for BNSF by Kennedy/Jenks Consultants.
- Volume III, Health and Safety Plan, BNSF Libby Rail Yard Libby Amphibole Impacted Soil Removal, Libby, Montana dated July 2004, prepared for BNSF by EMR.
- Revised Response Action Work Plan, Libby Railyard, Libby, Montana dated August 2004, prepared for BNSF by Kennedy/Jenks Consultants.
- Approval of Revised Work Plan for Libby Railyard dated 1 September 2004, prepared by EPA.

#### 1.4 PROJECT REPORTING REQUIREMENTS

Project reporting requirements, including record drawings, construction QA/QC, material submittals, health and safety plan, and final inspection report are provided in the appendices of this report. The appendices include:

Appendix A Construction Drawings

A-1 Record Drawings

A-2 Construction Design Drawings

Appendix B Request for Information (RFI) Forms

Appendix C Soil Sample Location Drawings

Appendix D Analytical Data Tables

Appendix E Construction Quality Assurance

E-1 Soil Compaction Data

E-2 Submittals

Appendix F Documentation of Material Taken to Asbestos Cell at Lincoln County

Landfill

Appendix G Documentation of Imported Clean Backfill

Appendix H Applicable or Relevant and Appropriate Requirements

#### 1.5 REQUEST FOR INFORMATION FORMS

During construction, any modifications, clarifications, changes, or additions to the Draft Response Action Work Plan (July 2004) were documented and submitted to EPA for approval. These modifications were documented to EPA as standard RFIs. Copies of the RFIs are included in Appendix B. The RFIs are included in the Response Action summaries for the relevant portions of the Site.

#### 2.0 DESCRIPTION OF WORK

The Response Action occurred from September 2004 to November 2004.

Envirocon, Kennedy/Jenks Consultants, and EMR safety personnel conducted daily safety meetings at the beginning of each workday. Most work was performed between 7:00 a.m. and 5:30 p.m., Monday through Saturday. Completion of the work required the use of a variety of heavy earthmoving equipment to perform excavation, soil removal, and cap/backfill installation. Best management practices (BMPs) were used throughout the construction area and haul routes to help mitigate potential airborne Libby amphibole fibers, control road dust, and manage stormwater.

The following consultants and contractors performed the construction and oversight:

Consultant/Contractor	Work Performed
Kennedy/Jenks Consultants	Resident Engineer, Construction Observation
EMR, Inc.	Construction Observation for asbestos issues
HKM Engineering, Inc.	Surveying and Compaction Testing
Envirocon, Inc.	General Contractor
Montana Railroad Services	Rail Removal Subcontractor
U.S. Environmental Protection Agency	Regulatory Agency
Camp Dresser & McKee (CDM)	Agency Oversight
Volpe Center	Agency Oversight

The following sections describe the construction activities of the Response Actions for the relevant segments of Libby Yard. Record drawings documenting the construction are enclosed in Appendix A-1. Construction design drawings are enclosed in Appendix A-2.

#### 2.1 TRACK REMOVAL/DEMOLITION

Rails and other track materials (OTM) from Tracks 1, 2, 3, 4, the West Spurs, and a portion of Track 5 were removed/demolished. OTM includes metallic appurtenances such as tie plates, spikes, joint bars, and bolts. The demolition is shown in Appendix A-2, Drawings D-1 through D-11. Tracks 1, 2, and connections to Track 5 and the City of Libby's West Spur will be reconstructed later. The anticipated reconstruction materials are concrete ties and 136-pound-per-yard ribbon rail.

The removed/demolished items were disposed as follows:

- Rails and OTM were removed and decontaminated by pressure washing, trucked
  to the Ripley Siding (approximately 6 miles northeast of the Site), and loaded
  onto railcars for final disposal as salvageable property belonging to Montana
  Railroad Services. A total of 28,182 linear rail feet (14,091 track feet) was
  removed for salvage. BNSF retained specialized rail parts such as track switches
  and tapered rail sections used to join rails of differing sizes.
- The Scale House (Appendix A-2, Drawing D-11) was demolished and disposed as potential ACM at the Lincoln County landfill.
- The concrete supports underlying the scale track located along Track 4 were demolished by jackhammer. Most of the structure was removed to the base of concrete, which was more than 12 feet below grade, and backfilled with clean imported sub-ballast material. An approximately 20-foot-long slab at the eastern end of the scale track structure was removed to a depth of at least 1 foot below original grade, covered with approximately 1 foot of adjacent native Zone 4/6/7 soil, then capped with geotextile and 12 inches of sub-ballast.
- All ties were removed from Tracks 1 and 2, part of Track 3, the removed portion of Track 5, and the portion of the West Spurs to be reconstructed. Most remaining ties were removed from the areas to be capped (Track 4, part of Track 3, and the remainder of the West Spurs). All removed ties were decontaminated by pressure washing on a conveyor device and inspected by EMR prior to stockpiling. The ties were loaded into BNSF railcars for transport. As of December 2004, between 7,900 and 8,000 decontaminated ties are scheduled for transport by rail to the Montana Waste Systems landfill in Great Falls. Montana, for final disposal. The quantity of 8,000 was agreed upon with the Contractor, which accounts for fragmented ties and statistical uncertainty in the count. EMR conducted confirmation sampling for asbestos fibers on random samples comprising approximately 5% of the decontaminated ties. The ties were analyzed with polarized light microscopy (PLM) by Analytica Group of Thornton, Colorado. No asbestos was detected in samples collected from the ties, and the ties were not classified as ACM. Two truckloads of wood tie debris were transported to the asbestos cell of the Lincoln County landfill.

#### 2.2 EXCAVATION/CAPPING

In areas of the Site located north of the BNSF main line track, soil believed to contain Libby amphibole was either excavated and backfilled with sub-ballast material or capped in place by sub-ballast material with a geotextile liner. Montana Railroad Services removed track and ties to provide access to the underlying soil.

#### 2.2.1 Zone 1/2/3

Before the geotextile liner and clean backfill material (railroad sub-ballast) were set in place, soil within Zone 1/2/3 that was believed to contain Libby amphibole was excavated to a tan clay layer [approximately 18 inches below ground surface (bgs)], or to the depth required to remove all visible hydrated biotite. After soil had been excavated to the prescribed depths, confirmation soil samples were collected to verify removal of Libby amphibole. One location (sample BN-71001) failed to achieve clearance, but the final excavation elevation was 6 feet below the original ground surface, which is greater than EPA's 4-foot standard for leaving potentially impacted soil in place. The location with remaining detectable Libby amphibole is shown on Appendix A-1, Record Drawing Sheet 3 and on Appendix C, Sheet C-4S.

After acceptable clearance results were received from Zones 1/2/3, the Contractor performed additional excavation and backfilling (clean imported fill) to achieve design sub-grade elevation in these areas. Appendix A-1, Record Drawing Sheets 3 and 4 show the areas as follows:

- Zone 1 was excavated to a final elevation at least 31 inches below the top of the
  adjacent mainline tie, geotextile liner installed, and the area backfilled with a
  minimum of 18 inches of clean imported sub-ballast material.
- Zone 2/3 was excavated to a final elevation at least 25 inches below the top of the adjacent mainline tie, geotextile liner installed, and the area backfilled with a minimum of 12 inches of clean imported sub-ballast material.

#### 2.2.2 Zone 4/6/7

Soil located in Zone 4/6/7 believed to contain Libby amphibole was capped in place by removing most railroad ties, placing a geotextile liner over the existing soil, and capping with a geotextile barrier and 12 inches of imported clean backfill (railroad sub-ballast). Potentially impacted surface soil within Zone 6 was removed as part of the clearing and grubbing activities along the northwestern property boundary and disposed in the asbestos cell of the Lincoln County landfill. Zone 7 constituted a sub-zone of Zone 4 that was identified in design documents to provide a location to stockpile decontaminated ties, if needed. Zone 7 was constructed identically to the remainder of Zone 4 and was never utilized for stockpilling materials in the manner originally identified in the Project Manual and Design Drawings.

EPA approved RFI 2004-01, which provided clean soil (as determined from soil sample results) from over-excavation within Zone 1/2/3 to be used as backfill comprising no more than 6 inches of the 12-inch cap in Zone 4/6/7. In selected locations on the eastern side of the Site, the uppermost 6 to 9 inches of the 12-inch cap consisted of clean imported sub-ballast material.

#### 2.2.3 Zone 5

Soil containing Libby amphibole within Zone 5 was scraped into Zone 4/7 (Shown on Record Drawing Sheet 3) where it was capped in place along with the Zone 4/7 soil. The excavated material comprised approximately 6 inches of soil in a 10-foot strip located immediately north of the BNSF property line, on the former W. R. Grace facility that is currently owned by the City of Libby. The excavated soil was replaced with clean imported backfill (railroad sub ballast). Geotextile was not placed beneath the cap materials, because the underlying soil had been previously remediated as part of the former W. R. Grace facility.

#### 2.2.4 Zone 8

As shown on Record Drawing Sheet 4, two areas of surface soil south of Track 5 (east of the Highway 37 overpass) were excavated and capped with clean imported sub-ballast material. These excavation/backfill areas are referenced on Record Drawing Sheet 4 as Zone 8. Zone 8 was not previously identified in the referenced design documents. The areas excavated were based on characterization soil samples BR-28001 to BR-30005 shown in Appendix C, Sheet C-5S. EMR collected characterization soil samples south of Track 5 during the 2004 remediation activities. Rather than being capped as originally proposed, the areas that contained detectable Libby amphibole in the soil were excavated and backfilled with clean imported sub-ballast to allow BNSF track crews to relocate Track 5 in the future, if necessary. Soil was excavated approximately 8 to 12 inches to the above-referenced tan clay layer, and clearance samples were obtained. The excavated area was covered with geotextile and backfilled with a minimum of 8 to 12 inches of clean imported railroad sub-ballast. Based on data from soil samples BR-29002 through BR-29004, the area between the two portions of Zone 8 did not require excavation.

#### 2.3 SOIL SAMPLES

Soil sample categories include characterization samples and clearance samples. In general, soil sample nomenclature consists of a prefix and a five-digit number. The prefix designates the type of sample, and the number identifies the sample location. Most samples are four-point composites collected every 50 feet over a distance of 200 feet; thus, four sub-samples comprise each composite sample. The sample numbers usually increase from east to west (e.g., composite sample BR-29000 is located west of sample BR-28000 and east of composite sample BR-30000). Where parallel rows of samples were collected along parallel tracks, the composite numbers usually increase from north to south (e.g., composite sample BR-11000 is located north of composite sample BR-12000). Individual sub-samples within the zone of a composite sample are identified by a digit in the right-hand column (e.g., BR-12001, BR-12002).

In April 2001, characterization soil samples were collected along the main line track at milepost locations and random locations within the Site. In 2002, soil samples BN-01000 through BN-22000 were collected in 100-by-100-foot square grids from which a five-point composite was collected. The sample data from 2001 and 2002 were reported to EPA previously.

DRAFT LIBBY Sample prefixes are designated as follows:

- Soil characterization sample names begin with no prefix or prefix BN.
- Clearance samples have prefixes of BR, BX, and BY. BR was used during the
  first sampling for clearance. If the sample failed clearance, and further excavation
  was performed, the next clearance sample was given the BX prefix. In one
  instance, additional excavation was required and the sample prefix BY was used
  to indicate that over-excavation. One soil clearance sample collected at a depth
  of 6 feet bgs was designated as sample BN-71001 (a characterization prefix)
  because it contained detectable Libby amphibole as discussed elsewhere in this
  report. Clearance was not achieved for this location.

#### 2.3.1 Characterization Samples

Railroad bed characterization data was compiled from a variety of sample collection efforts undertaken by EMR from 2001 to 2004, as well as the visual mapping of hydrated biotite in October 2001. Supplemental characterization soil sampling was conducted in July 2004 to identify the western limit of the excavation zone. EMR established a grid system for soil sampling that included metal stakes to assist in defining the boundaries of impacted areas. Surface soil samples were analyzed by a variety of methods between October 2001 and October 2004, including PLM Method 9002, Issue 2, and PLM Method 9002-VE in accordance with the National Institute for Occupational Safety and Health (NIOSH) methods. Samples collected in early 2001 were submitted to Clayton Group Services for analysis by "EPA asbestos in soil method," which involved separating the coarse, medium and fine fractions of samples and conducting a combination of TEM semi-quantitative and PLM Method 600 analyses on those fractions. Areas showing impacts in the 2001 samples were excavated or capped in 2004.

Characterization soil sample locations for samples collected in 2001 were submitted to Mr. Mark Raney of Volpe National Transportation Systems Center in a 25 January 2002 facsimile transmittal. Characterization soil sample results are shown in Appendix D, Table D-1. Laboratory reports for characterization soil samples collected before 2004 were submitted electronically to EPA from EMSL Laboratories and via facsimile upon receipt by EMR. Hard copies of those reports, along with results from soil samples collected in 2004, will be submitted under separate cover to EPA by EMR.

Soil samples were collected in October 2002 and analyzed for other compounds in order to complete the soil profile for disposal. These samples (T1-EO-100 through T4-WO-400) were analyzed for gasoline-range hydrocarbons, diesel-range hydrocarbons, lube oil-range hydrocarbons, total metals, and volatile organic compounds (VOCs) by EPA Method 8260B. Soil analytical results from this event are included in Appendix D, Table D-6.

#### 2.3.2 Clearance Samples

After soil removal from Zone 1/2/3, clearance soil samples were collected at 50-foot intervals along the rail lines, including one composite sample per every 200-foot length of track. As described above, clearance sample prefixes are BR, BX, and BY. The laboratory retained the discrete samples comprising the composites pending receipt of composite sample test results. Sample locations are shown in Appendix C, Sheets C-2S to C-6S. Soil analytical results from clearance samples are included in Appendix D, Table D-2.

The samples were collected from the surface of the excavation bottom and submitted for asbestos analysis by EMSL Laboratories in Libby, Montana. Prior to submittal, CDM personnel reviewed and verified sample paperwork and nomenclature. Sample coordinates were obtained by measuring from a baseline established along the BNSF main line track by HKM Engineering, the sample location was marked by a plastic flag driven into the ground, and the location was established and documented with a hand-held global positioning system (GPS) device. If the composite soil sample tested positive for Libby amphibole, the discrete soil samples were analyzed to determine which sample location contained asbestos. The areas with detectable results were re-excavated in a 25-foot radius around the sample locations (areas previously cleared or areas to be capped were not included in the excavation). The soil samples were collected in accordance with the USEPA 540-R-97-028 document, Superfund Method for the Determination of Releasable Asbestos in Soils and Bulk Materials, Appendix 15 of the Quality Analysis Program Plan (QAPP) for the USEPA Libby Mine project. The samples were analyzed for Libby Amphibole by PLM Method 9002, Issue 2.

#### 2.4 SOIL AND TRACK DISPOSAL

Soil potentially containing Libby amphibole was placed in dump trucks for transport to the Lincoln County Landfill. A canvas tarpaulin was placed over the load and secured during truck transit to and from the landfill. Water was applied frequently to control dust during the excavation and loading of soil potentially containing Libby amphibole, and workers onsite used proper respiratory and dermal protection. Equipment operators involved with loading asbestos-containing soil onto trucks were equipped with Level C personal protective equipment (PPE) and personal monitoring equipment. All trucks and equipment leaving the exclusion zone (EZ) were decontaminated over the truck decontamination pad at the eastern end of the Site. Truck cabs were equipped with a positive pressure ventilation system equipped with a high efficiency particulate air (HEPA) filter.

The rails, OTM, and ties were decontaminated and recycled or disposed as described in Section 2.1. Decontaminated rails and OTM were salvaged for recycling, and decontaminated ties will be disposed at the Montana Waste Systems Landfill in Great Falls, Montana.

#### 2.5 HEALTH AND SAFETY

Site health and safety requirements were identified in EMR's July 2004 Health and Safety Plan. Kennedy/Jenks Consultants and the Contractor developed and followed their own Health and Safety Plans based on the EMR plan. EMR acted as the primary Health and Safety observer, with additional periodic observation by BNSF. Response Action work was conducted within the EZ, which was demarcated with safety cones and caution tape, including a sign indicating that respirators and PPE were required prior to entrance. Site personnel were required to wear level C PPE inside the EZ at all times. A Contamination Reduction Zone (CRZ) established outside the EZ contained a three-stage decontamination trailer with clean room, shower, and equipment room. Site personnel were required to use the decontamination trailer upon entering and exiting the EZ. Equipment used inside the EZ was washed with a pressure washer prior to leaving the EZ. An existing decontamination pad was reconstructed with a weir to an excavation filled with sub-ballast material to prevent overflow water from leaving the decontamination pad. At the end of construction, the decontamination pad and overflow area were excavated and disposed in the asbestos cell of the Lincoln County Landfill.

#### 2.6 AIR MONITORING

Prior to construction, background air samples were collected equidistant across the length of the yard. During construction, work was conducted in modified Level C PPE within an EZ that extended northward from a boundary 8.5 feet north of the main line track centerline to include the limits of the work area, which changed frequently. Ambient air samples were collected during Response Actions at five perimeter monitoring stations around each EZ (sometimes active work areas included more than one EZ) to verify that asbestos fibers did not migrate outside the EZ. Ambient air samples were submitted for analysis by the TEM Asbestos Schools Hazard Abatement Act (AHERA) Method. If airborne asbestos fibers were detected at a concentration greater than 0.01 fibers per cubic centimeter (f/cc), work practices were examined and altered upon receipt of the sample results. Ambient air samples were submitted to EMSL Laboratories for analysis after CDM personnel reviewed and verified the sample paperwork and; monitoring results are documented in Appendix D, Table D-3.

Personnel air monitoring was conducted on approximately 25% of the work force. Personal air samples were collected with a low volume battery pump from chosen personnel inside the EZ. These air samples were representative of a full 8-hour shift. An AIHA-certified analyst with EMR analyzed the majority of the personnel monitoring samples onsite using the NIOSH 7400 PCM Method. When an AHIA-certified analyst was not present onsite, personnel air samples were submitted to the EMSL laboratory in Libby, Montana for the same analysis. If an air sample inside the EZ exceeded 0.1 f/cc, the sample was submitted to EMSL for analysis by the TEM AHERA Method. Initial respiratory protection inside the EZ consisted of full-face positive-pressure air-purifying respirators (PAPR) equipped with high-efficiency particulate air (HEPA) filters. Based on the results of air monitoring during Site activities, respiratory protection was downgraded to half-face respirators after approval from the Certified Industrial Hygienist (CIH). Personal air monitoring results for samples analyzed by EMSL are documented in Appendix D. Tables D-3 and D-4.

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#### 2.7 SOIL AND RAILROAD TIE DISPOSAL CHARACTERIZATION

In anticipation of landfill disposal, Site soil samples were collected in October 2002 to characterize the soil for non-asbestos constituents. The results of this characterization sampling are reported in Appendix D, Table D-5. Samples were analyzed for gasoline, diesel-, and lube oil-range hydrocarbons, eight metals by EPA 6010-Series Methods, and VOC by EPA Method 8260B. Detected compounds were within the ranges acceptable for landfill disposal.

Forty railroad ties were randomly selected and sampled for analysis by PLM methods to document decontamination procedures. Asbestos fibers were not detected in any samples. Sample results are reported in Appendix D, Table D-6.

#### 2.8 REPORTING AND COORDINATION ACTIVITIES

EMR completed notification to the Montana State Department of Environmental Quality (MDEQ) Solid Waste division in accordance with the AOC. Prior to beginning work, Envirocon provided a courtesy notification to EPA and MDEQ in accordance with National Emission Standards for Hazardous Air Pollutants (NESHAPS) 40CFR 61, Sub-part M. EMR submitted daily reports and sampling logs to Kennedy/Jenks Consultants at the end of the workday, including air monitoring tests and results, daily safety reports, and soil removal reports. EMR prepared weekly and monthly progress reports for submittal to EPA.

#### 2.9 FINAL SITE RESTORATION

The finished grade and sub-grade for the rail beds and cap material were in accordance with the design drawings and RFIs. A surveyor licensed in the State of Montana established the final elevations.

#### 3.0 CONSTRUCTION QUALITY ASSURANCE

The following sections provide brief descriptions of the Construction Quality Assurance (CQA) activities completed for the project. Kennedy/Jenks Consultants, EMR, HKM, Envirocon, and EPA representatives performed CQA daily throughout the project.

#### 3.1 EARTHWORK

Earthwork quality assurance requirements outlined in *The Burlington Northern and Santa Fe Railway Company Libby Yard Asbestiform Fiber Removal Project Manual* (July 2004) were followed for soil density tests, gradation analyses, and dust control.

Sub-ballast material placed for the reconstructed rail beds was compacted to 95% compaction by ASTM D1557 modified proctor density. Compaction testing was performed by an approved testing firm (HKM Engineering of Butte, Montana) at random intervals but not less than every 100 feet along the length of the yard. Density tests were performed onsite with a nuclear density gage to determine the in-place density of compacted soil. Geotechnical soil analyses (gradations, proctor) were performed offsite to verify material conformance with project specifications. Compaction testing results are provided in Appendix E-1.

#### 3.2 CONSTRUCTION MATERIALS VERIFICATION

Submittals for project materials, including sub-ballast, geotextile fabric, and fence materials were received and approved prior to installation (Appendix E-2). Upon delivery to the Site, the material was visually examined by the contractors and Kennedy/Jenks Consultants to assure conformance with the specifications. Material tags, invoices, and delivery tickets were obtained onsite as further verification that the material met specifications. Material verification documentation is enclosed in Appendix E-2.

#### 3.3 CAP PLACEMENT

The sub-ballast cap material was supplied by Remp Sand and Gravel, a local source acceptable to BNSF and EPA (Remp Sand and Gravel). The sub-ballast was placed in 12- to 24-inch lifts and compacted with a vibratory compactor. Backfill thickness beneath Zones 1 and 2/3 was verified by before and after survey data. Backfill thickness for Zones 5 and 8 and cap thickness for Zone 4/6/7 were verified by measurement at the cap front during placement of sub-ballast and bulldozing, as well as by survey data. Compaction was tested as described in Section 3.1.

#### 4.0 QUANTITIES OF MATERIALS

The total quantities of materials are summarized in Table 1. The quantities are based on the following:

- Removed rail was measured with a measuring wheel prior to removal.
- Following decontamination, removed ties were counted while they were stacked, prior to loading into railcars for future disposal.
- Soil and other potential ACM transported to the Lincoln County Landfill for incorporation in the asbestos cell was weighed on a certified truck scale at the Site. Documentation of the amount of material taken to the landfill asbestos cell is provided in Appendix F.
- Imported sub-ballast from Remp Sand and Gravel was weighed on a certified truck scale at the Site prior to placement. Documentation of the amount of clean imported fill is provided in Appendix G.

#### 5.0 CONSTRUCTION COMPLETION INSPECTION

A final construction inspection was conducted on 11 November 2004. The Site inspection included personnel from EPA and its contractors, Montana Department of Environmental Quality, BNSF, Kennedy/Jenks Consultants, and Envirocon. No deficiencies were identified during this final inspection.

#### 6.0 ARAR ANALYSIS

Compliance with applicable or relevant and appropriate requirements (ARARs) is documented in Appendix  ${\sf H}$ .

#### REFERENCES

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## **Tables**

#### TABLE 1

# QUANTITIES OF MATERIALS THE BURLINGTON NORTHERN AND SANTA FE RAILWAY COMPANY LIBBY YARD RESPONSE ACTION 2004 LIBBY, MONTANA

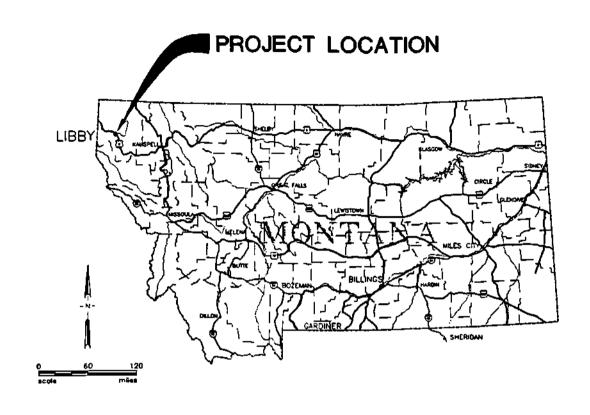
ltem	Quantity	Units	Comments
Rail and other track materials	28,182	linear feet	Recycled by Montana Railroad Services (14,091 track-feet)
Railroad ties	8,000	each	Pending disposal at Montana Waste Systems Landfill, Great Falls, Montana
Potentially impacted soil	12,859.38	tons	Disposed at asbestos cell of Lincoln County Landfill, Montana (Appendix F)
Clean imported backfill	17,792.31	tons	Remp Sand and Gravel (Appendix G)

## Appendix A

**Construction Drawings** 

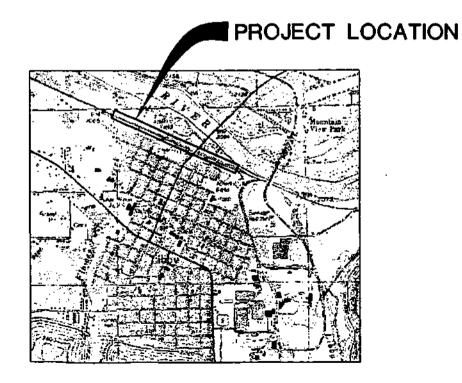
### Appendix A-1

**Record Drawings** 



# RECORD DRAWINGS for the LIBBY RAILYARD. BURLINGTON NORTHERN & SANTA FE RAILWAY COMPANY in

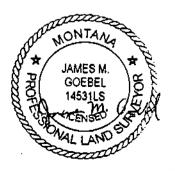
LIBBY, MONTANA



Prepared for : KENNEDY/JENKS CONSULTANTS





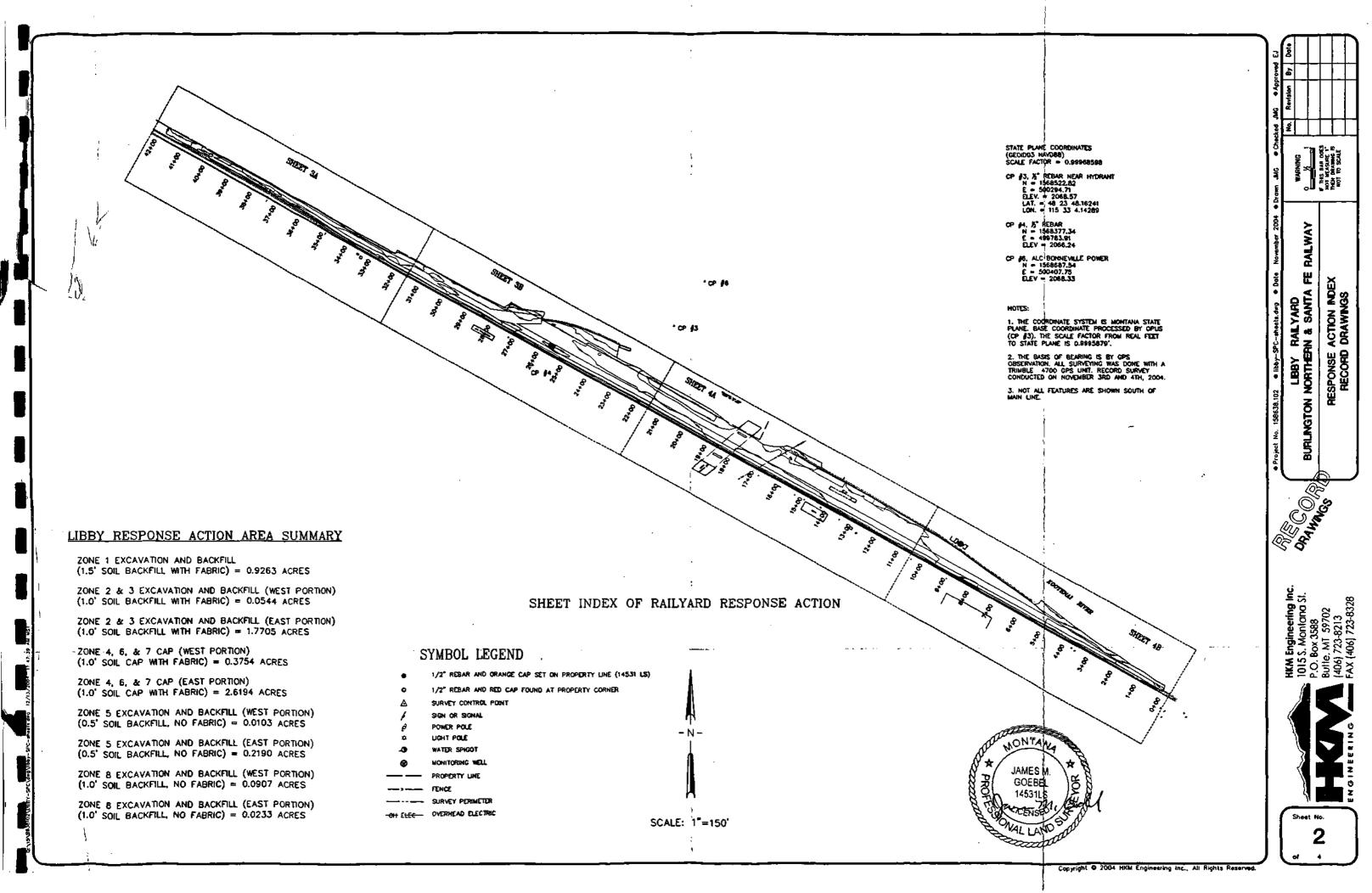


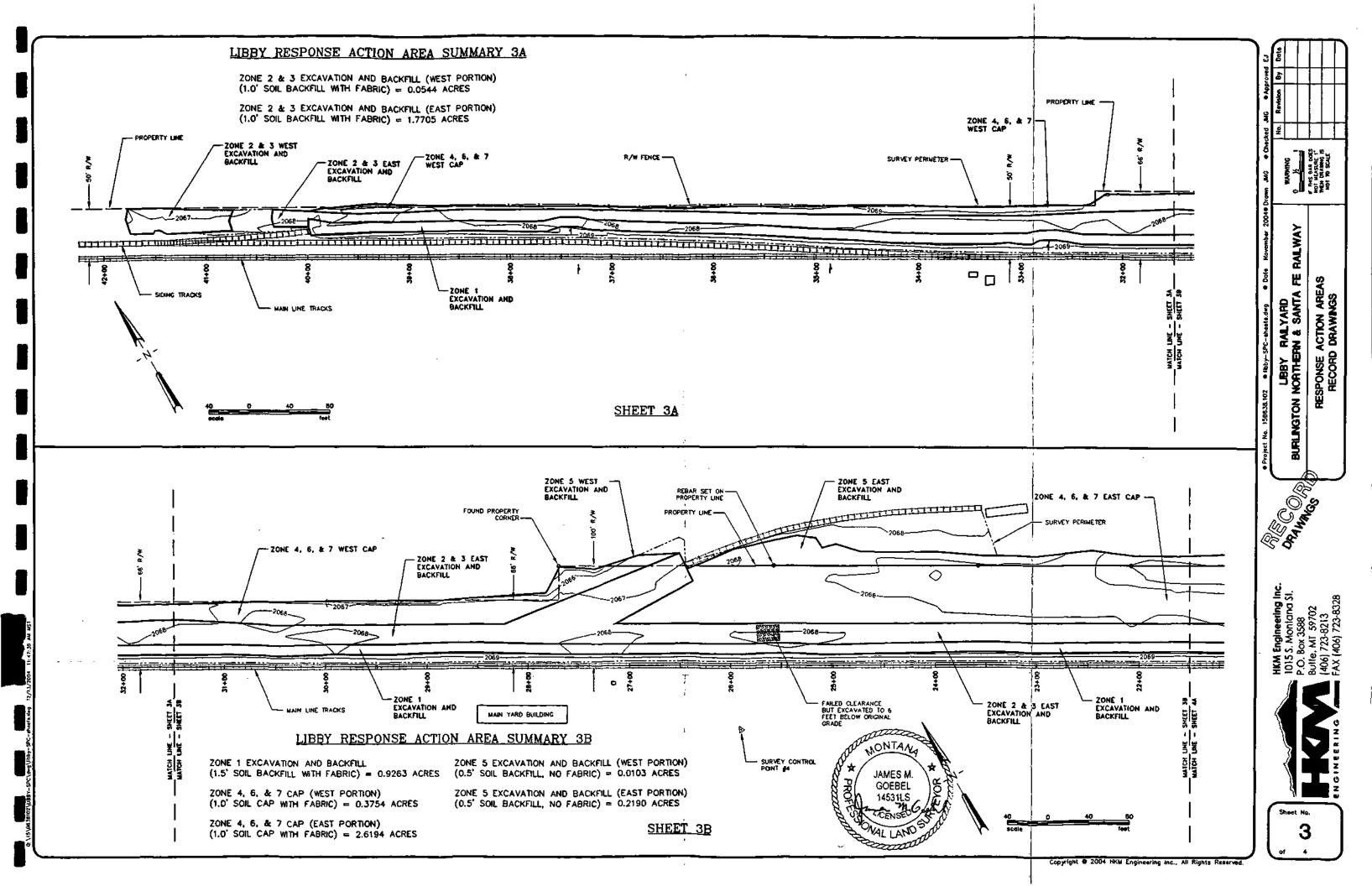


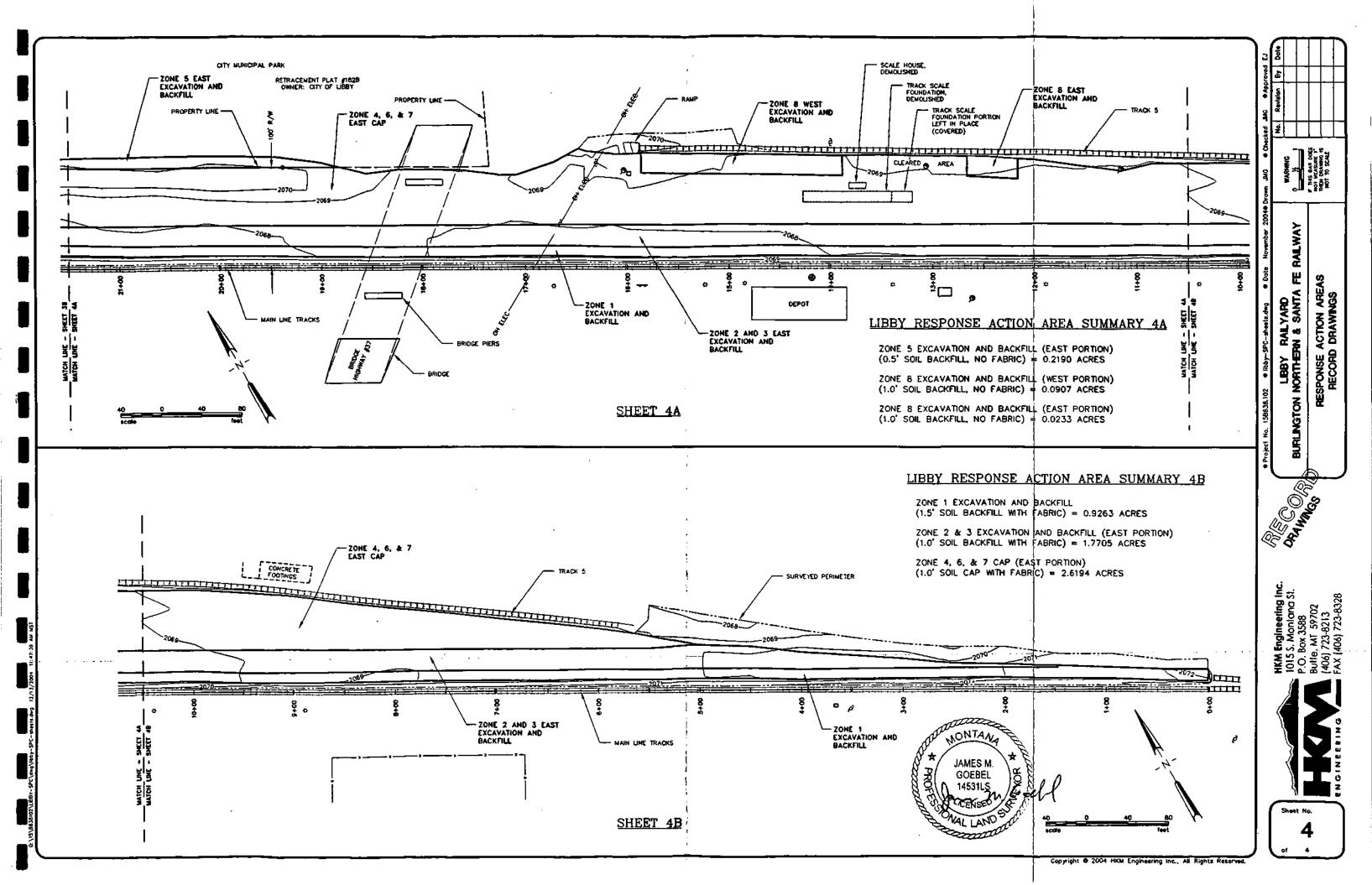
HKM Engineering Inc. 1015 S. Montono St. P.O. Box 3588 Butte, MT 59702 (406) 723-8213 FAX (406) 723-8328

PROJECT NO. 158638.102

DECEMBER 2004







 Appendix A-2
Construction Design Drawings

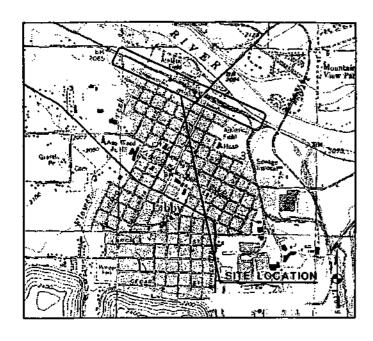
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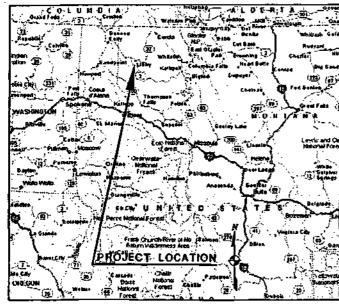
## BURLINGTON NORTHERN & SANTA FE RAILWAY COMPANY

## LIBBY RAILYARD RESPONSE ACTION

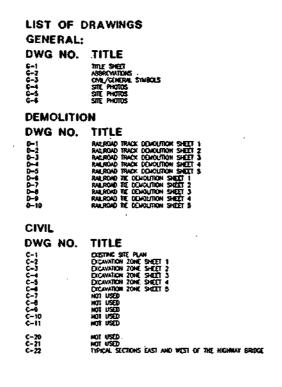
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KENNEDY/JENKS CONSULTANTS





LIBBY MONTANA VICINITY MAPS





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IPWN: D. MOTH:	Kennedy/Jenks Consultants
DHODE R. GUCLOMO	Engineere & Scientiste
DEST APPROVAL	32001 32nd Ave. S, Suite 100 Federal Way, Washingto 9600
OATE:	9600



The Burlington Northern and Santa Fe Railway Company
LIBBY RAILYARD
RESPONSE ACTION
LIBBY, MONTANA

TITLE SHEET

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#### **ABBREVIATIONS**

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BHST APPROVAL

Kennedy/Jenks Consultants Engineers & Scientists 32001 32nd Ave. S. Suite 100 Federal Way, Washington 98001

The Burlington Northern and Santa Fe Railway Company LIBBY RAILYARD RESPONSE ACTION LIBBY, MONTANA

**ABBREVIATIONS** 

BID ISSUE JAN, 2004 G-2

#### CIVIL/GENERAL SYMBOLS

FIRE PROTECTION WATER (EXISTING)		CONTROL POINT	<u> </u>	STRUCTURE OR PUPE (NEW)	
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Kennedy/Jenks Consultants Engineers & Scientists

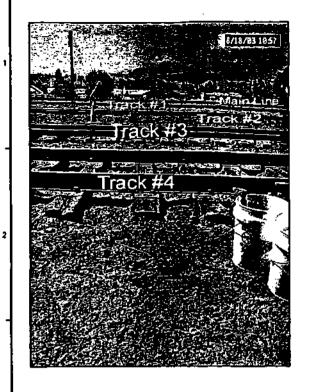
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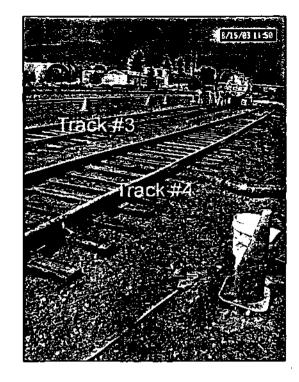
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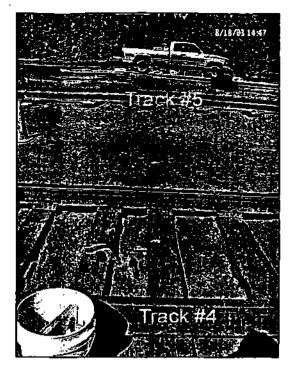
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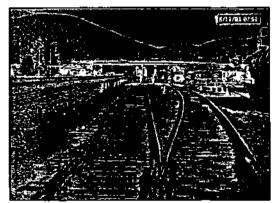
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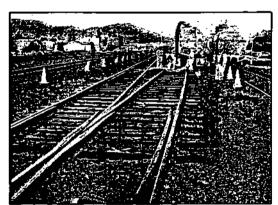


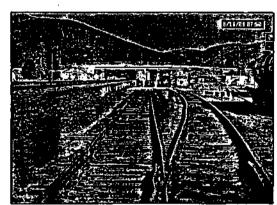




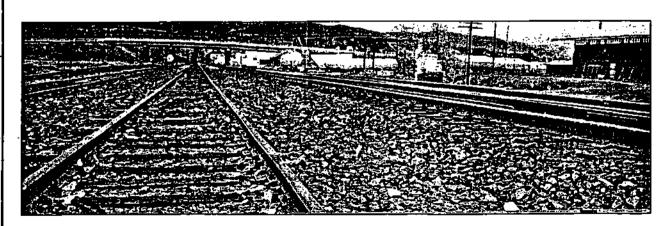
















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Engineers & Scientists

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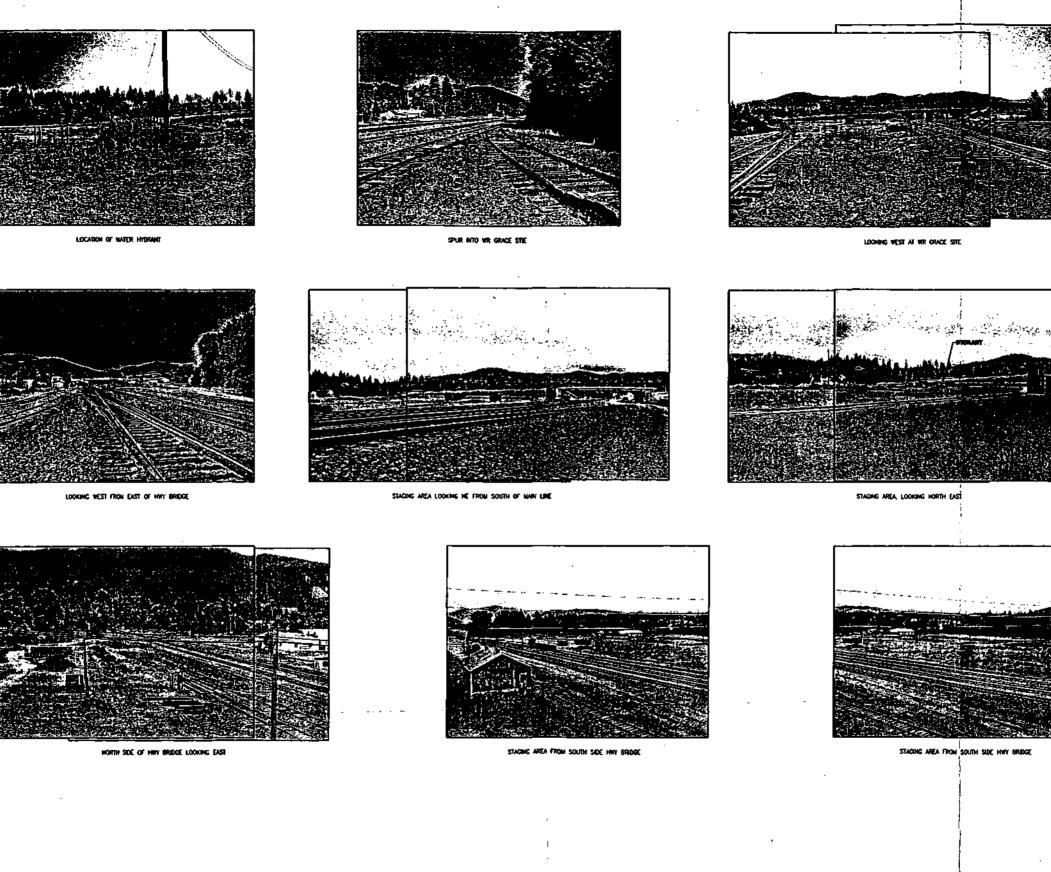
The Burlington Northern and Santa Fe Railway Company
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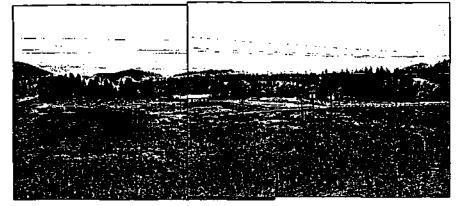
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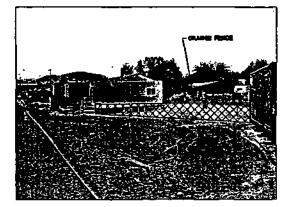
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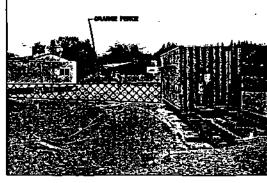
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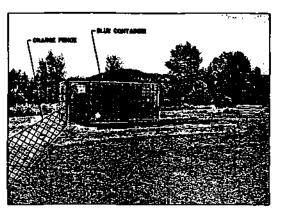
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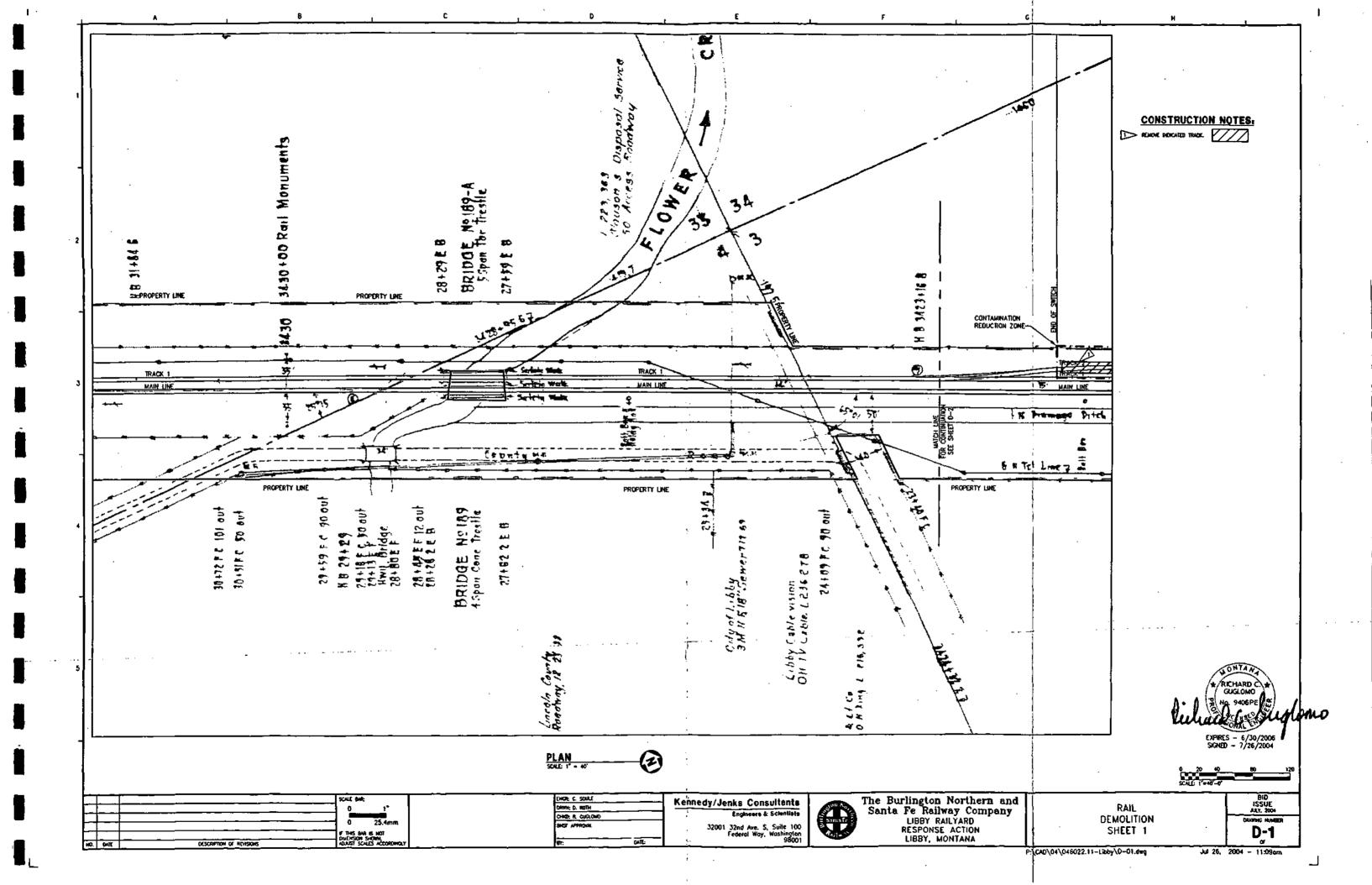
The Burlington Northern and Santa Fe Railway Company
LIBBY RAILYARD
RESPONSE ACTION
LIBBY, MONTANA

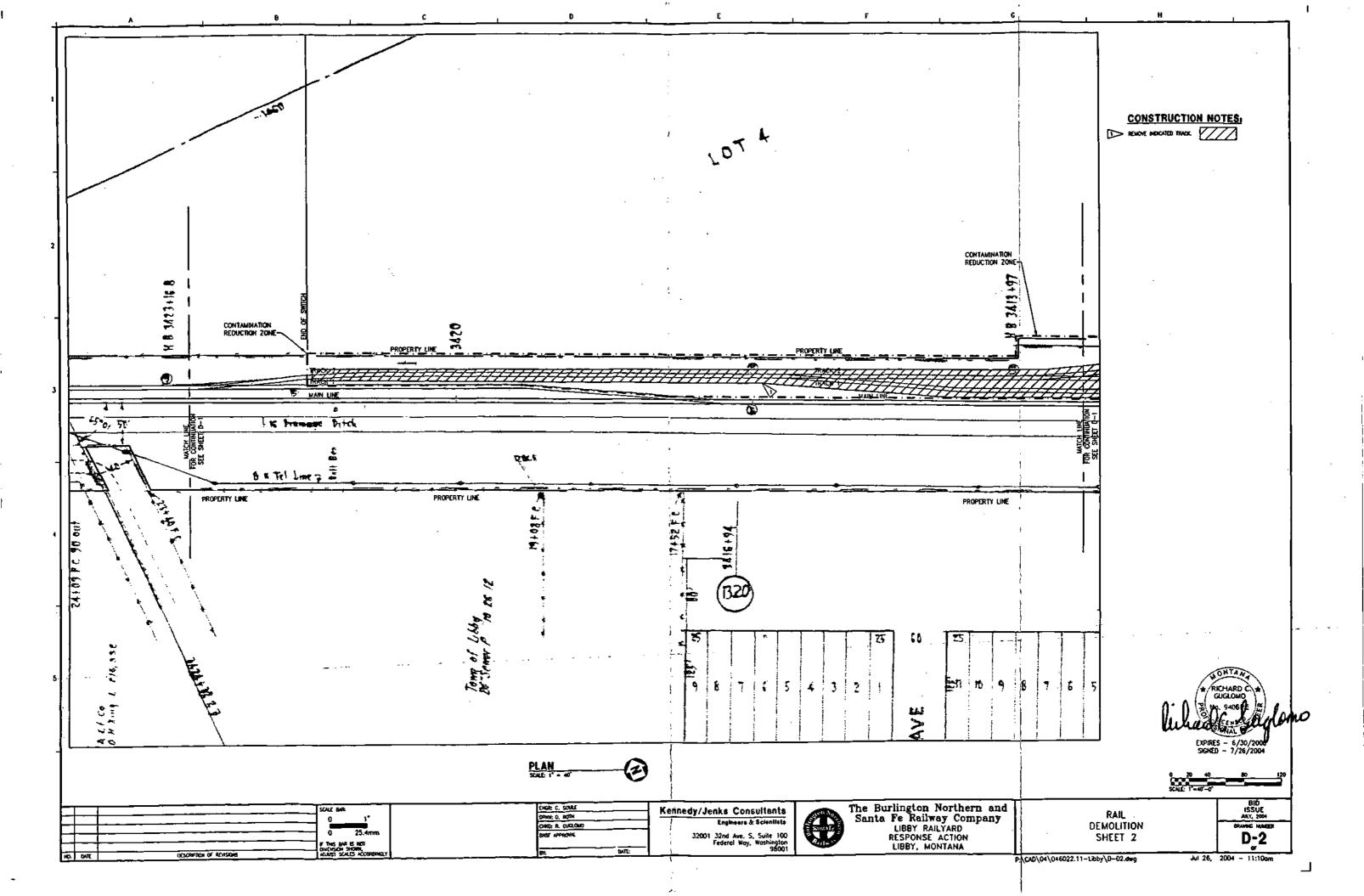
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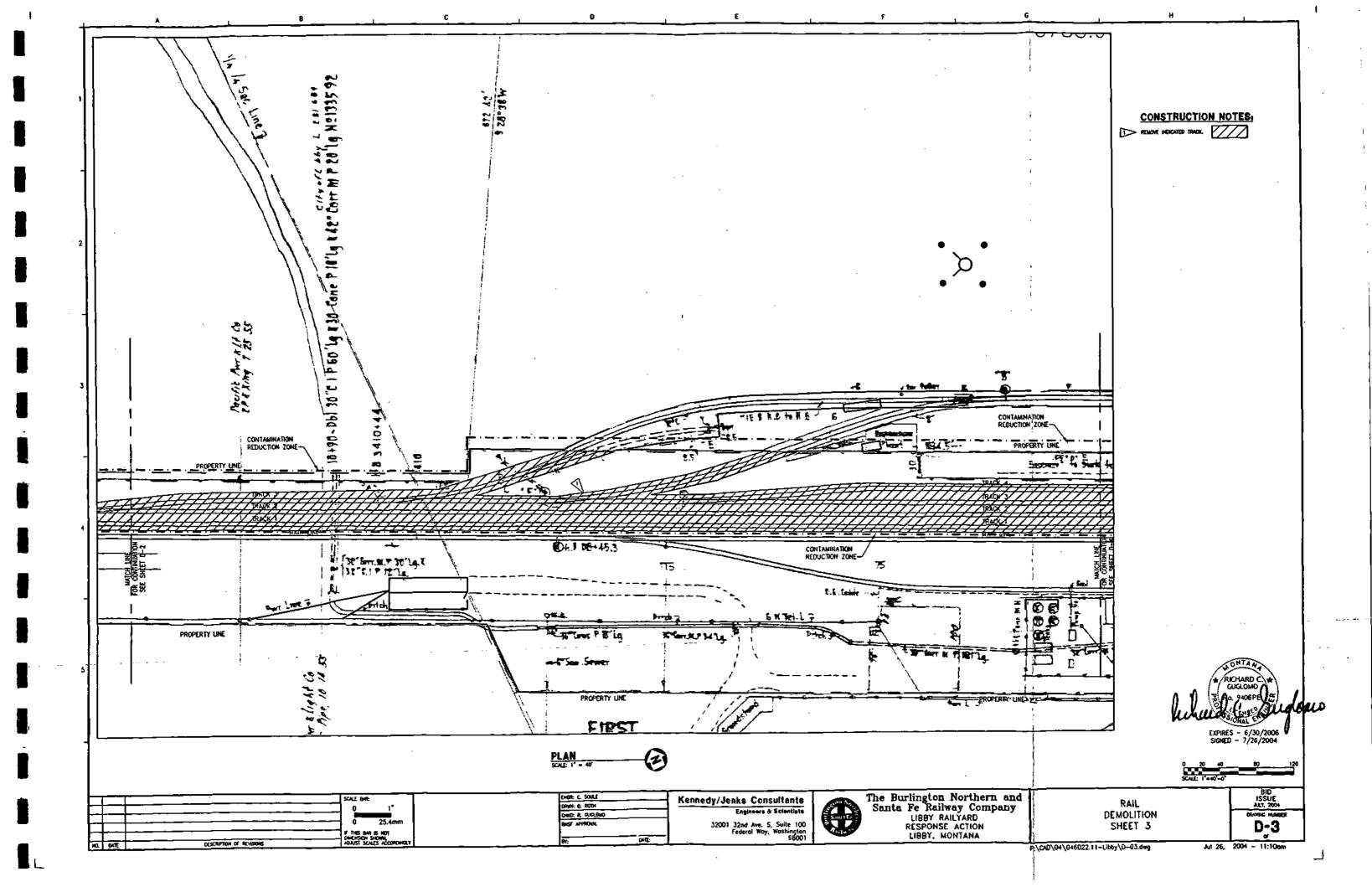
ISSUE JAY, 2004 CRAWING MARKER G-6

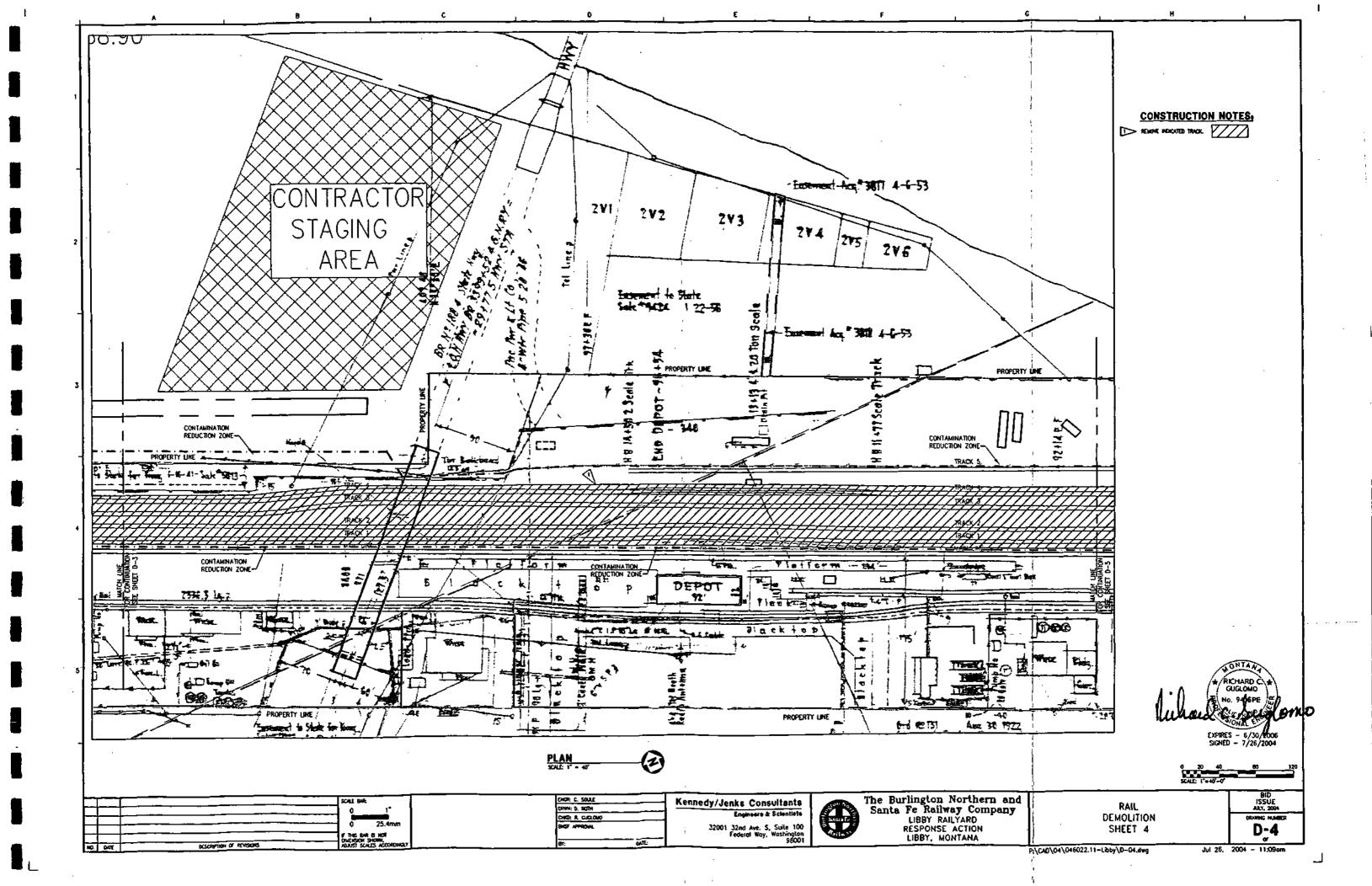
P\CAD\04\046022.11-Libby\G-06.d=g

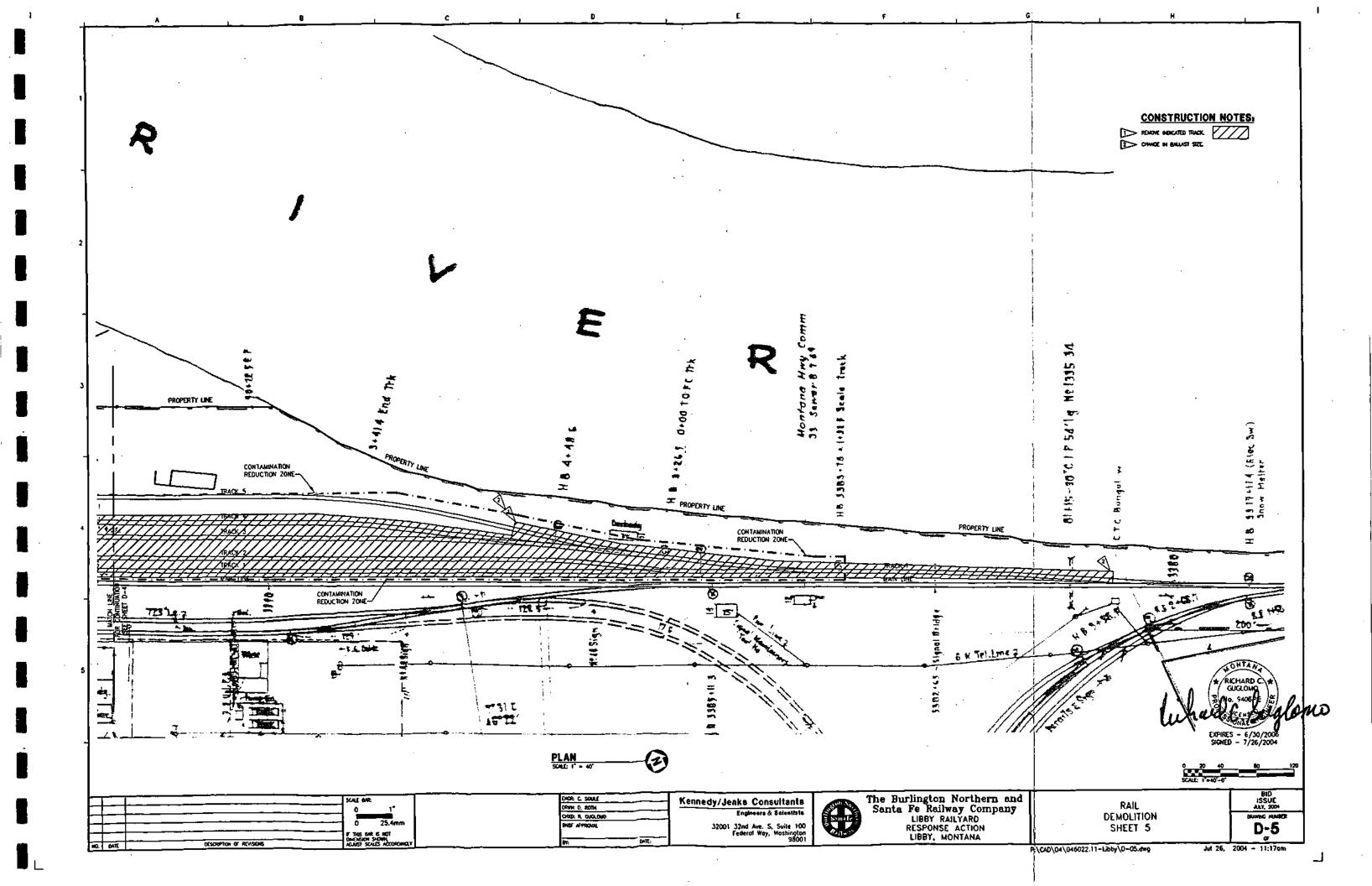
Jul 26, 2004 - 10:46cm

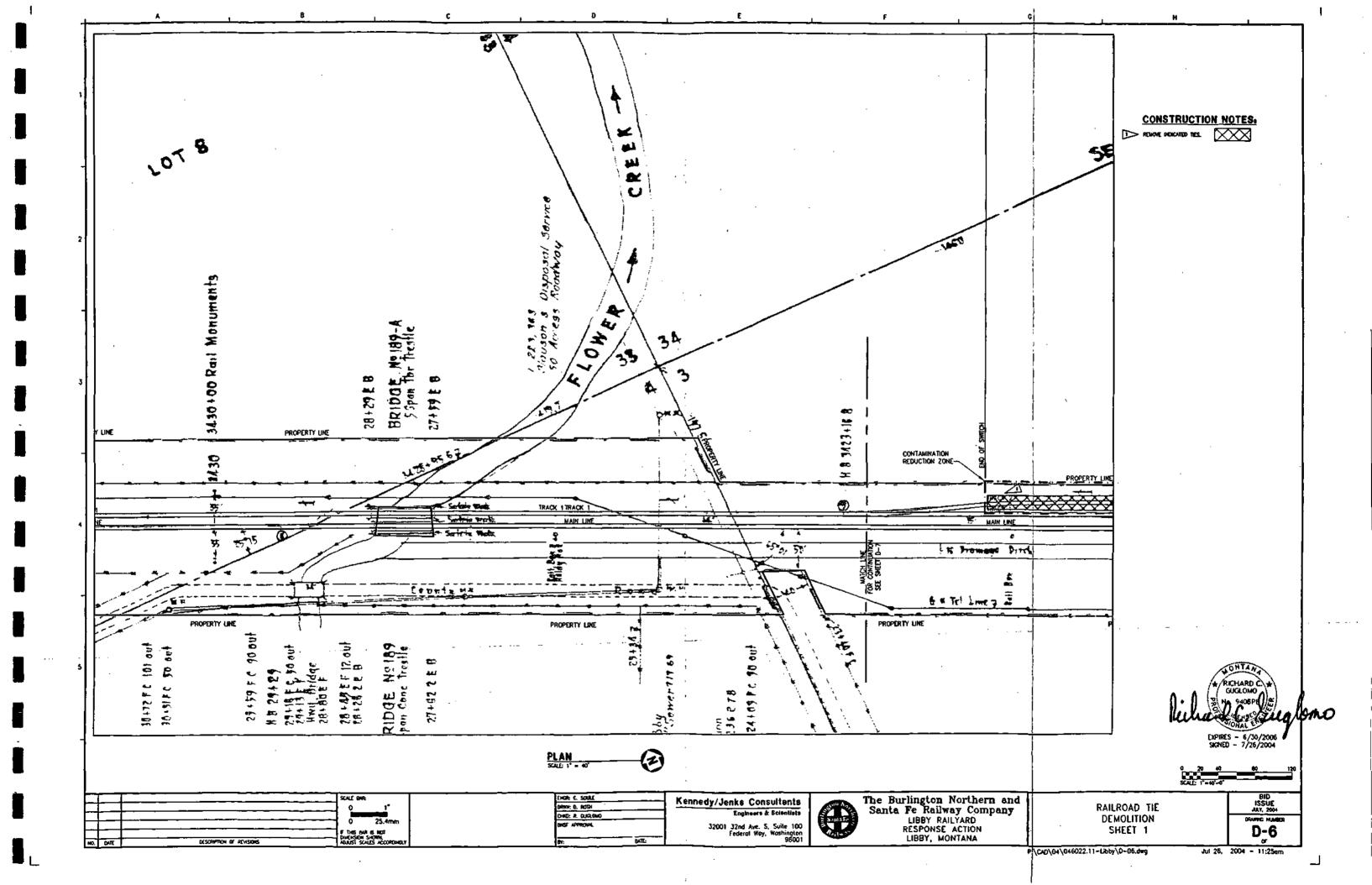


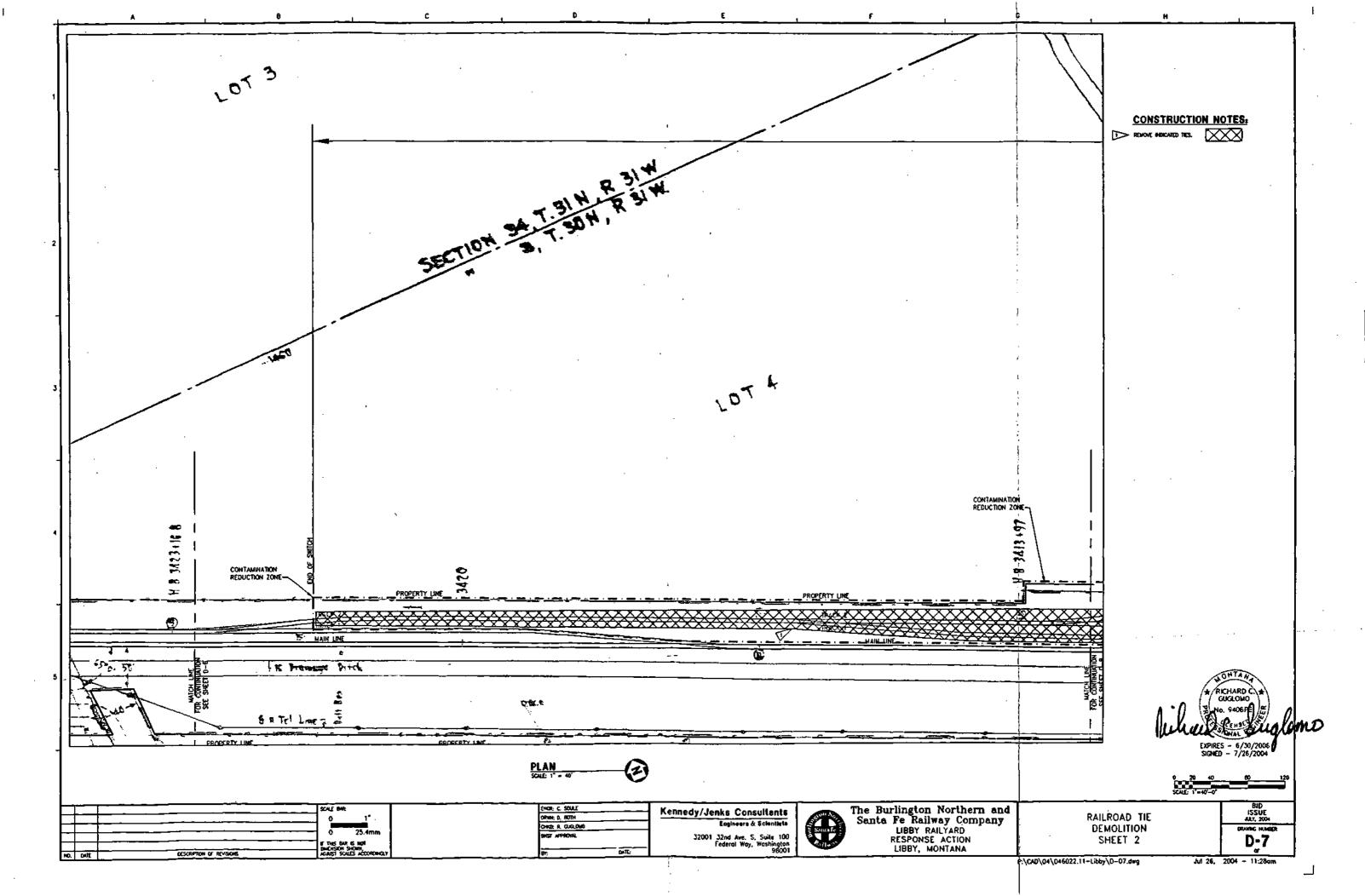


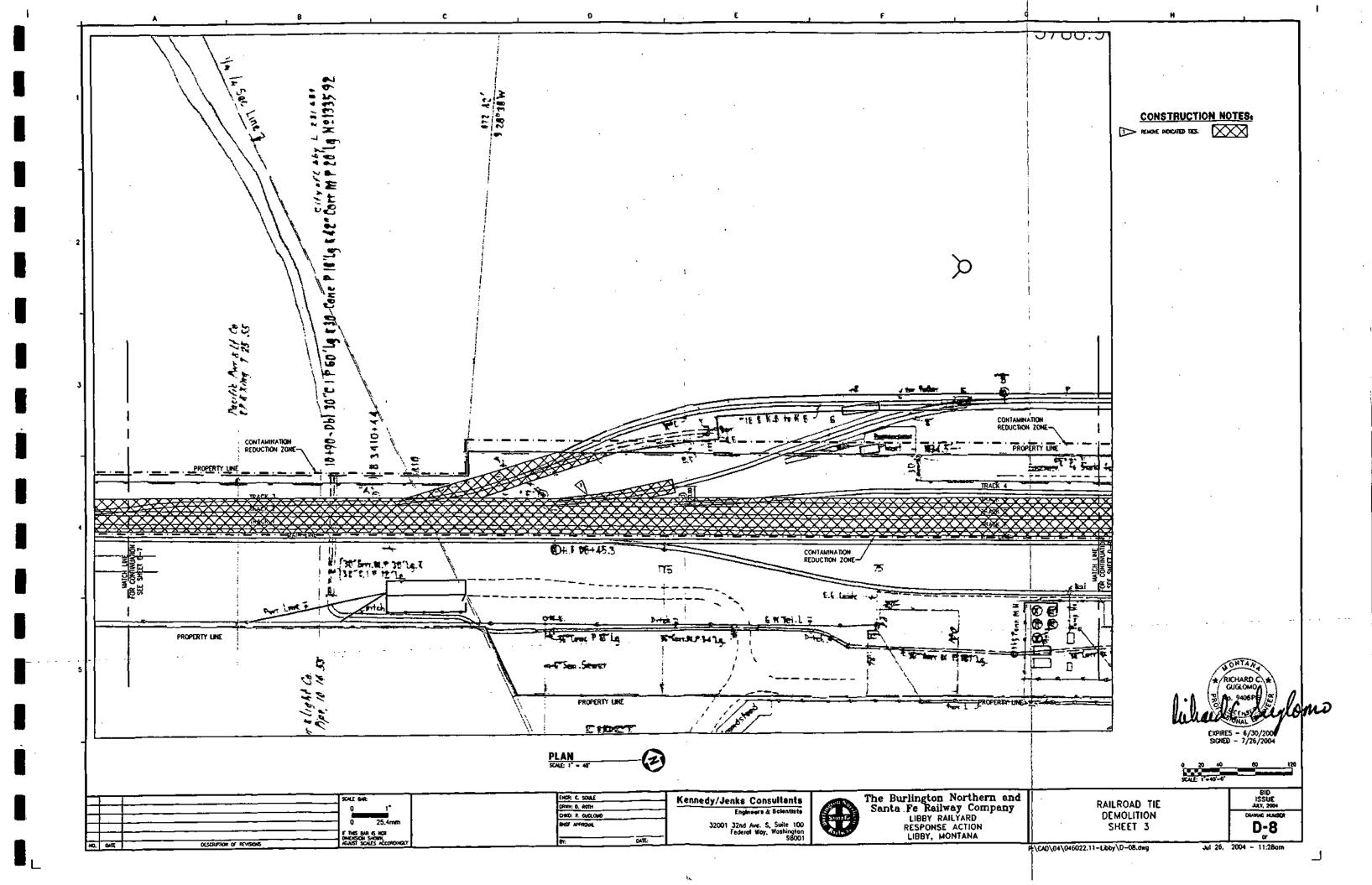


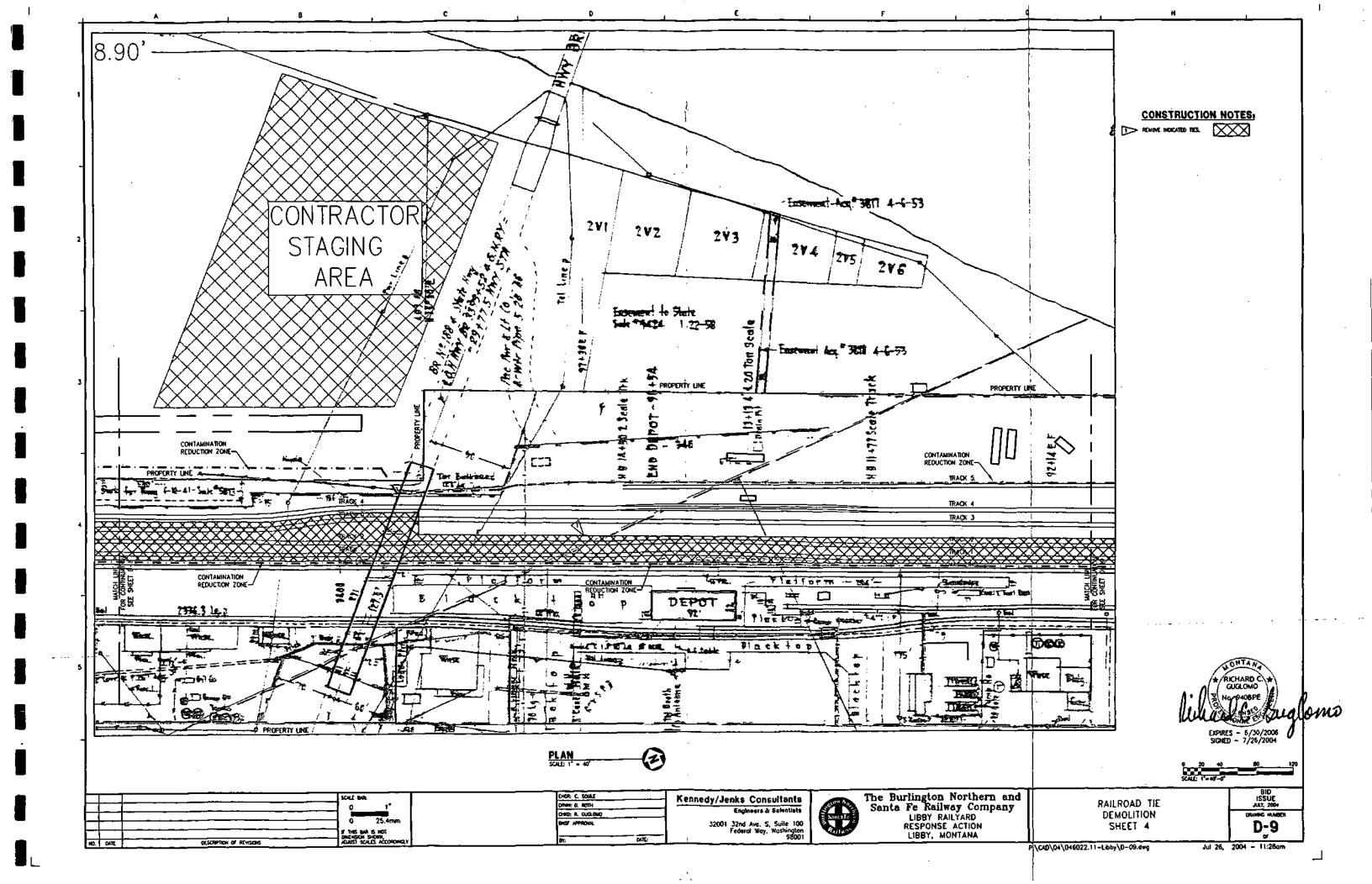


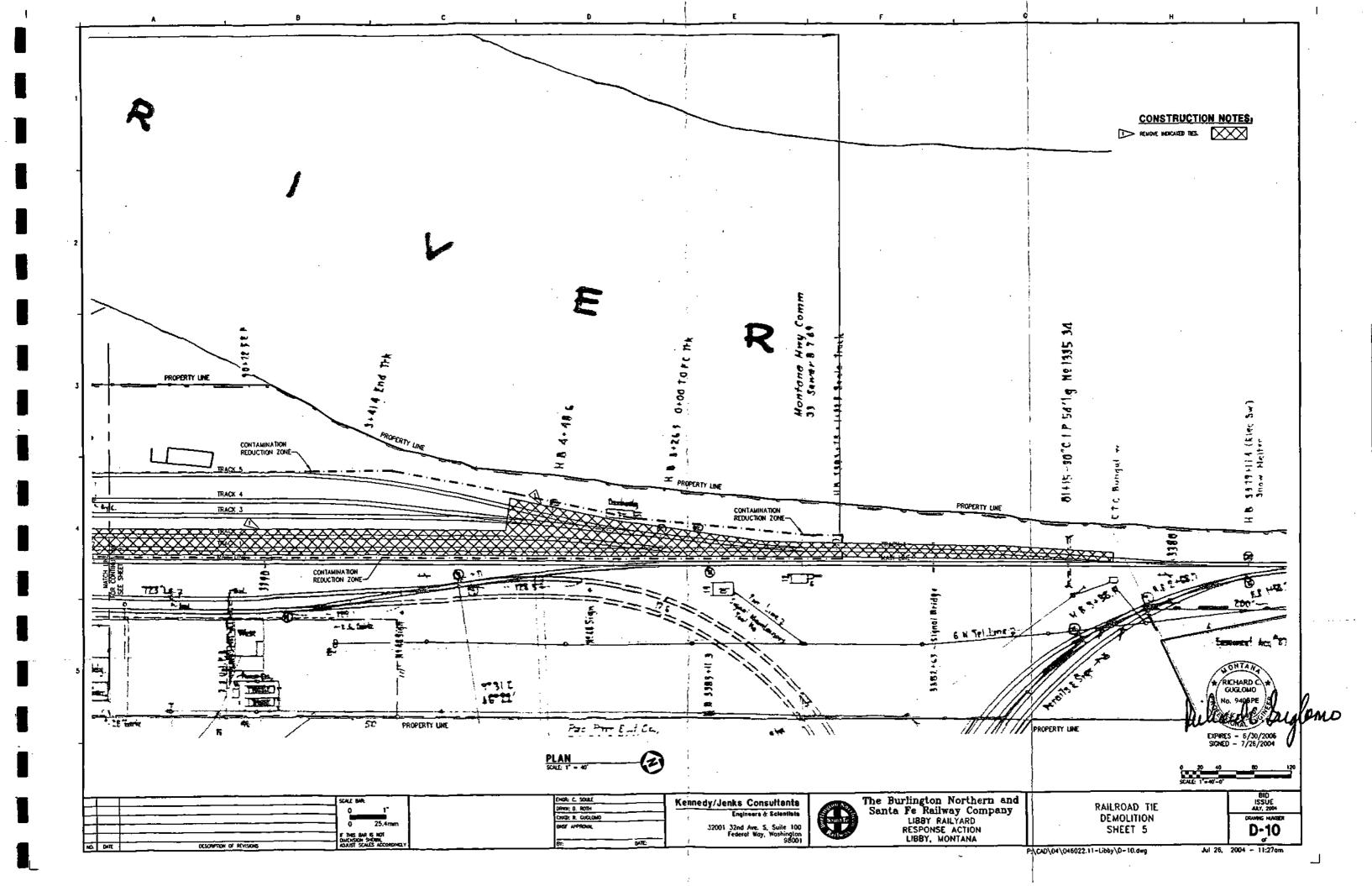


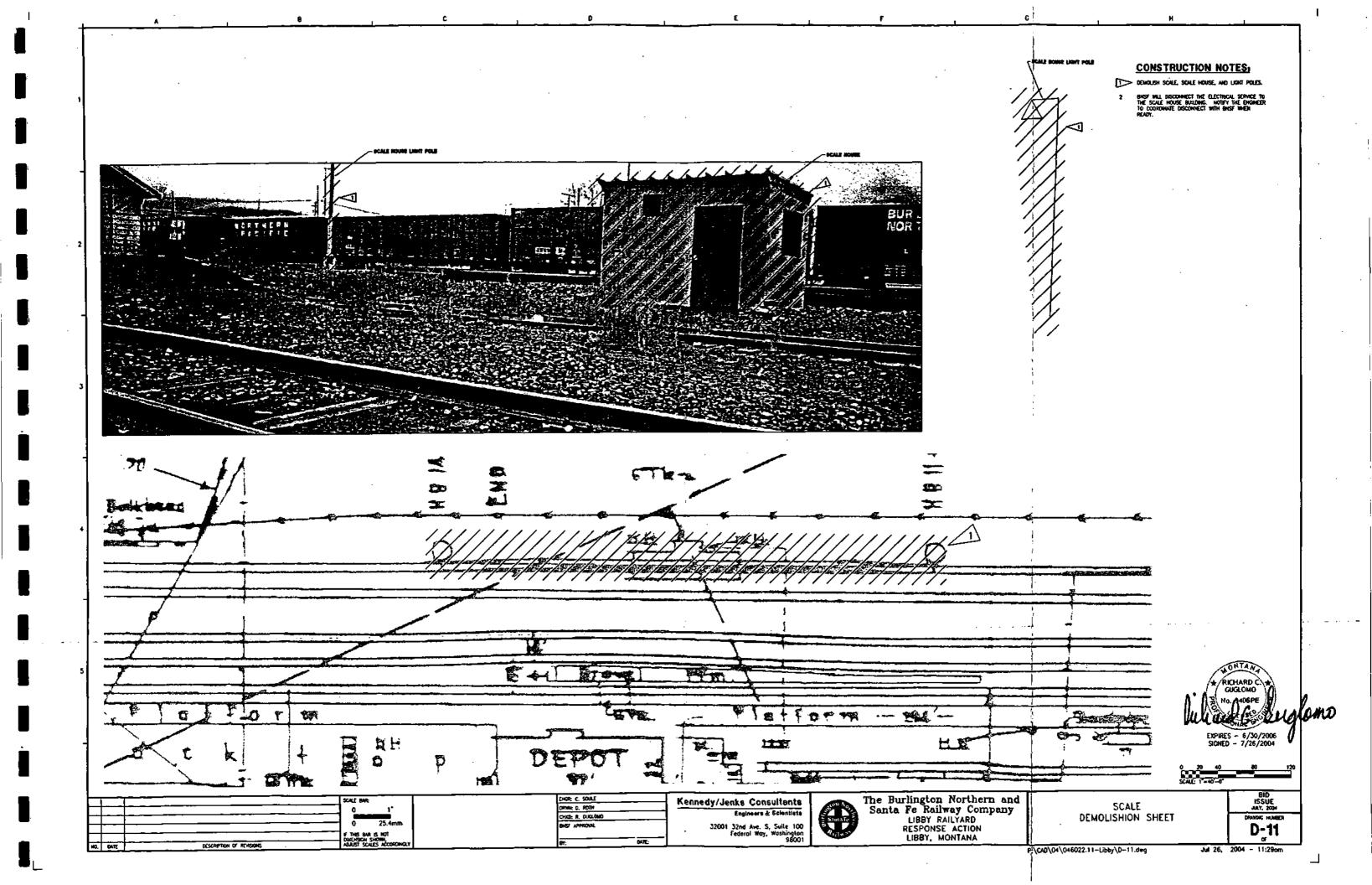


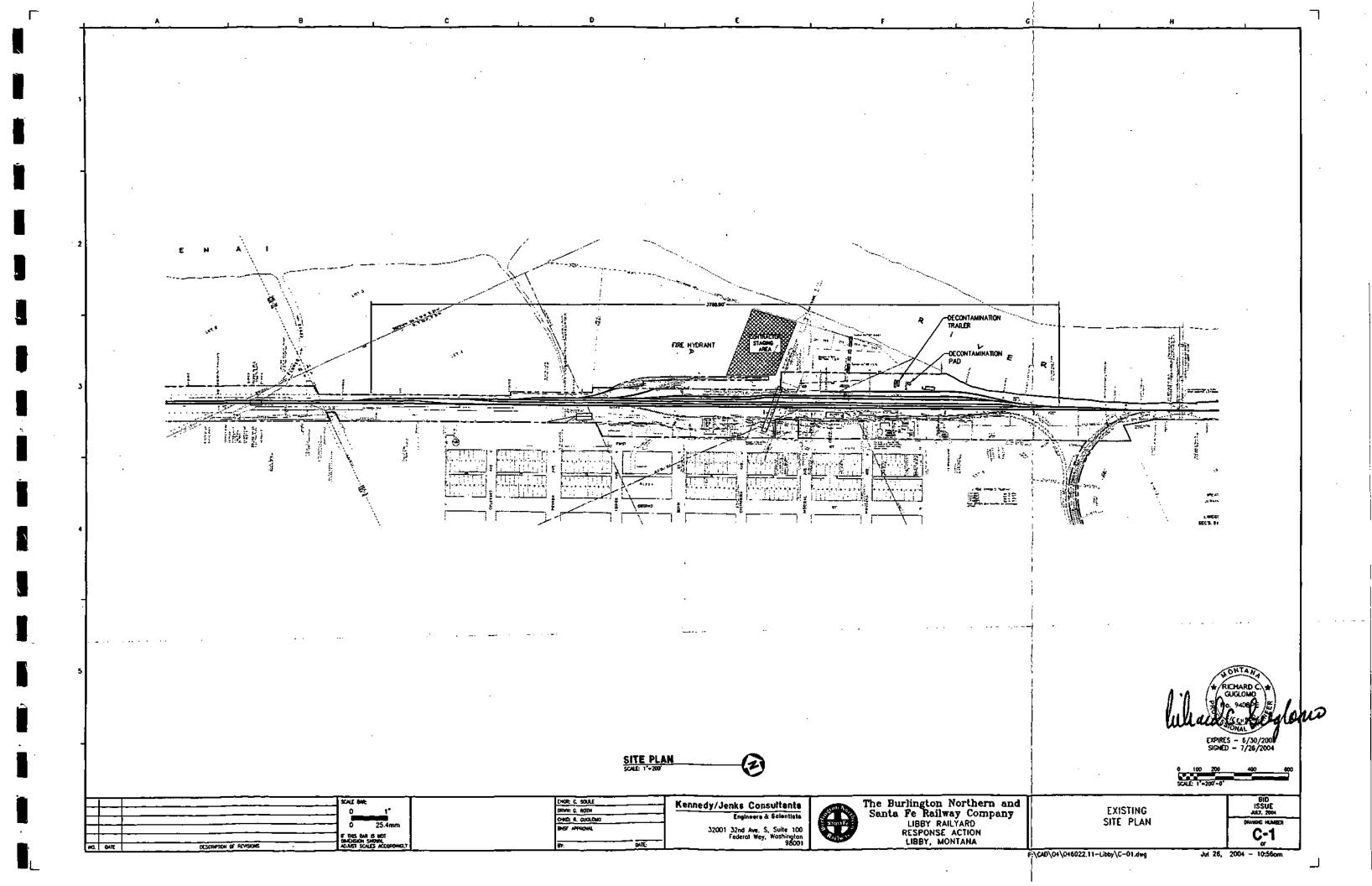


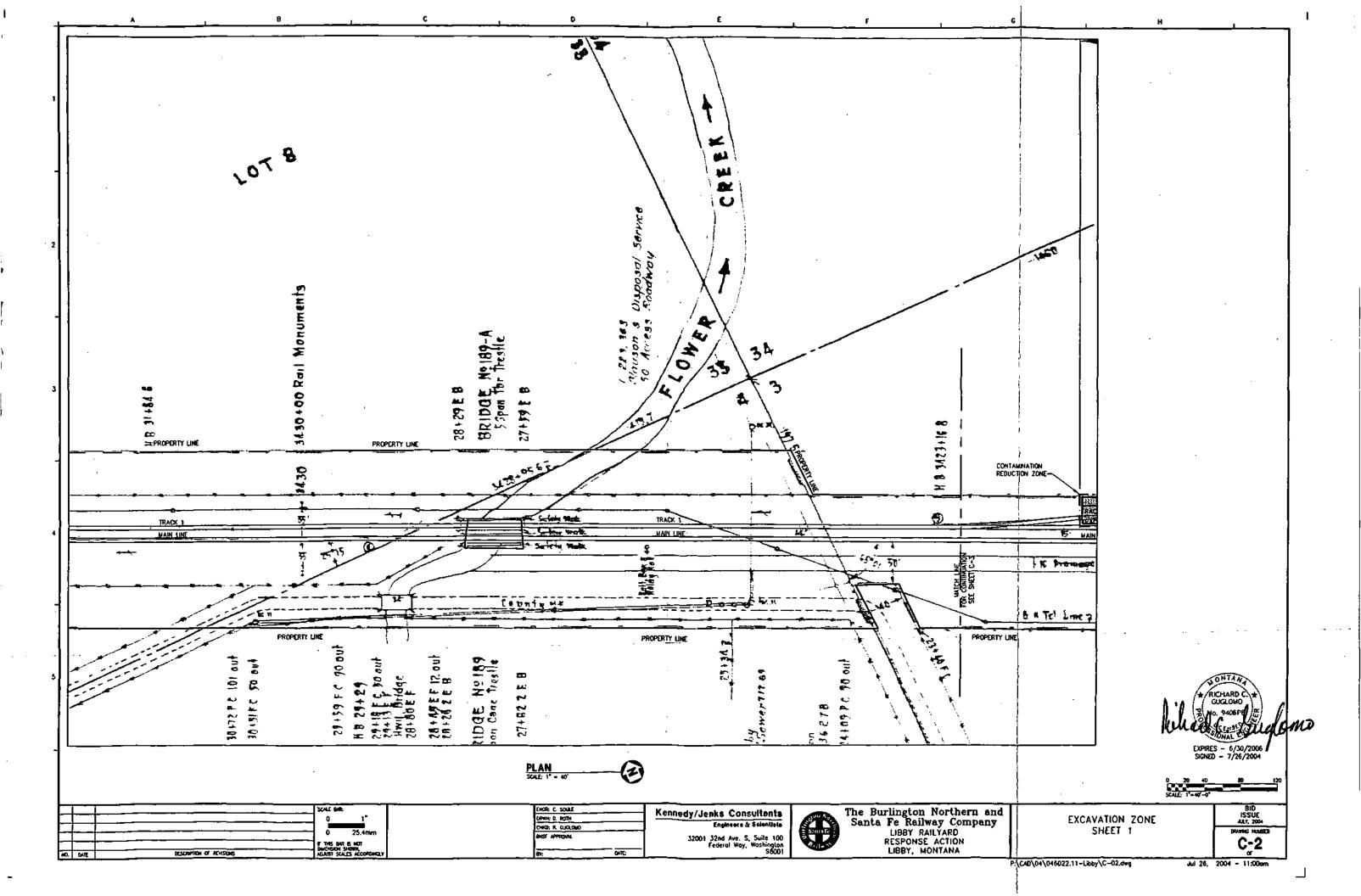


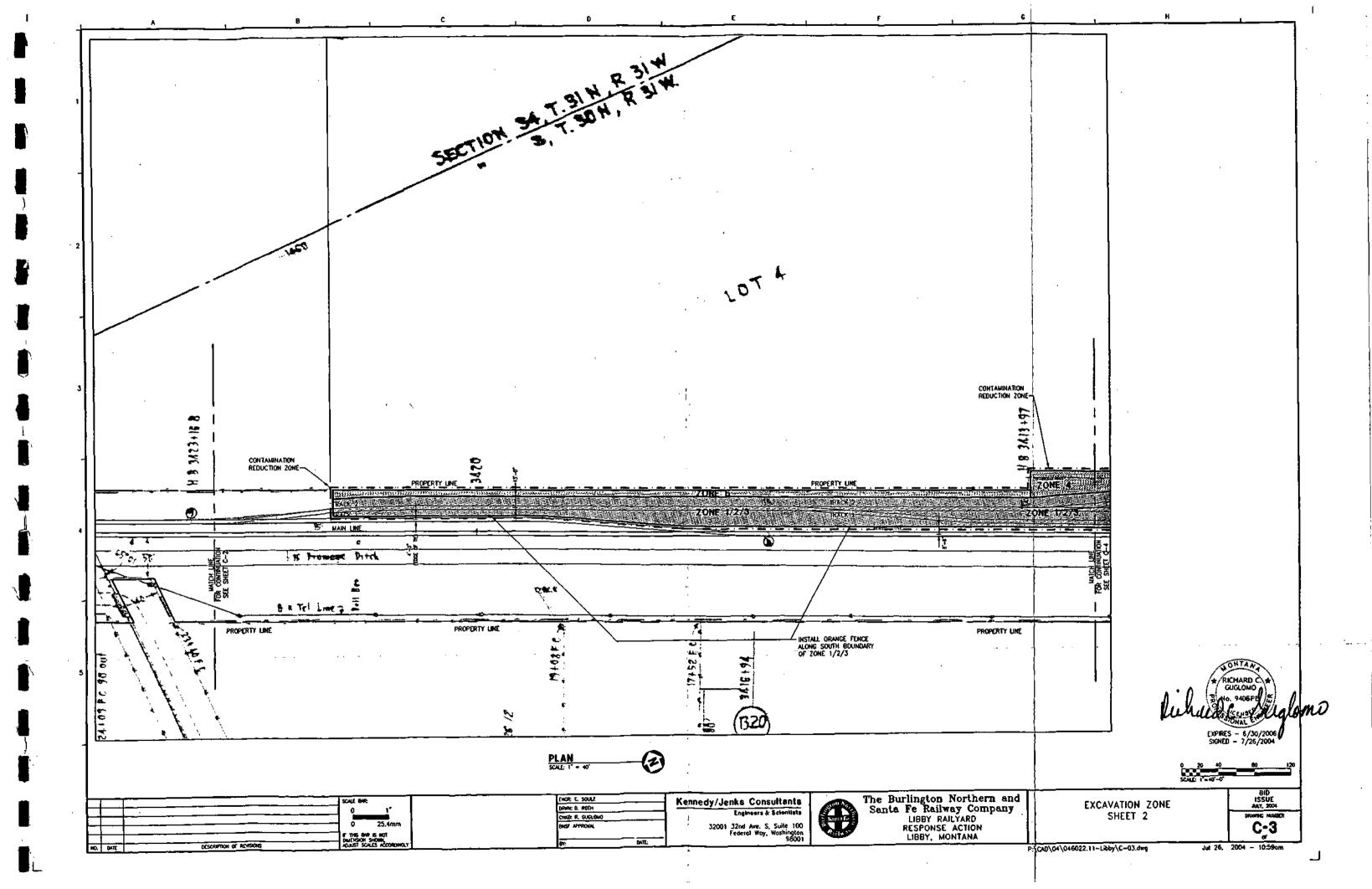


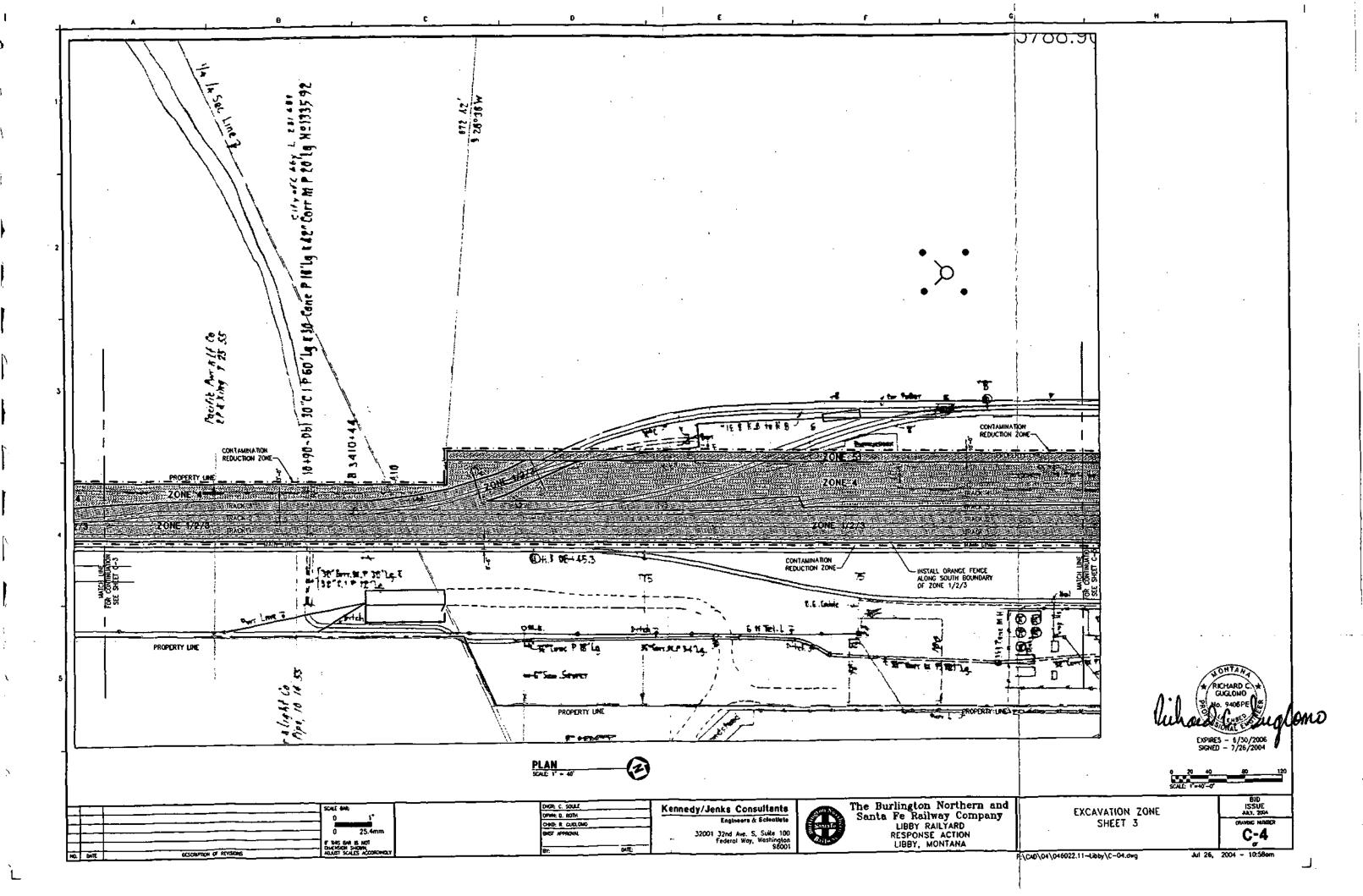


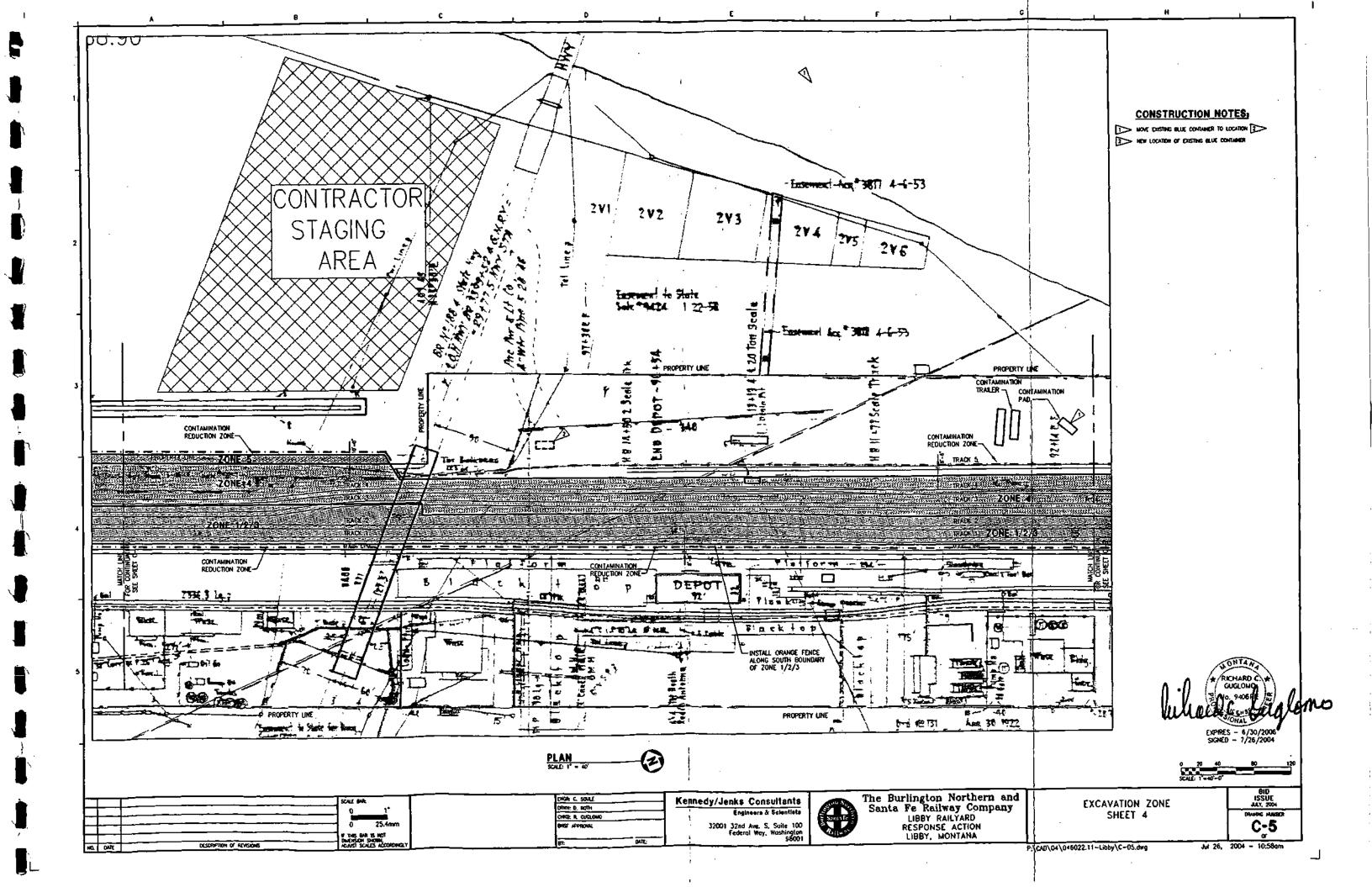


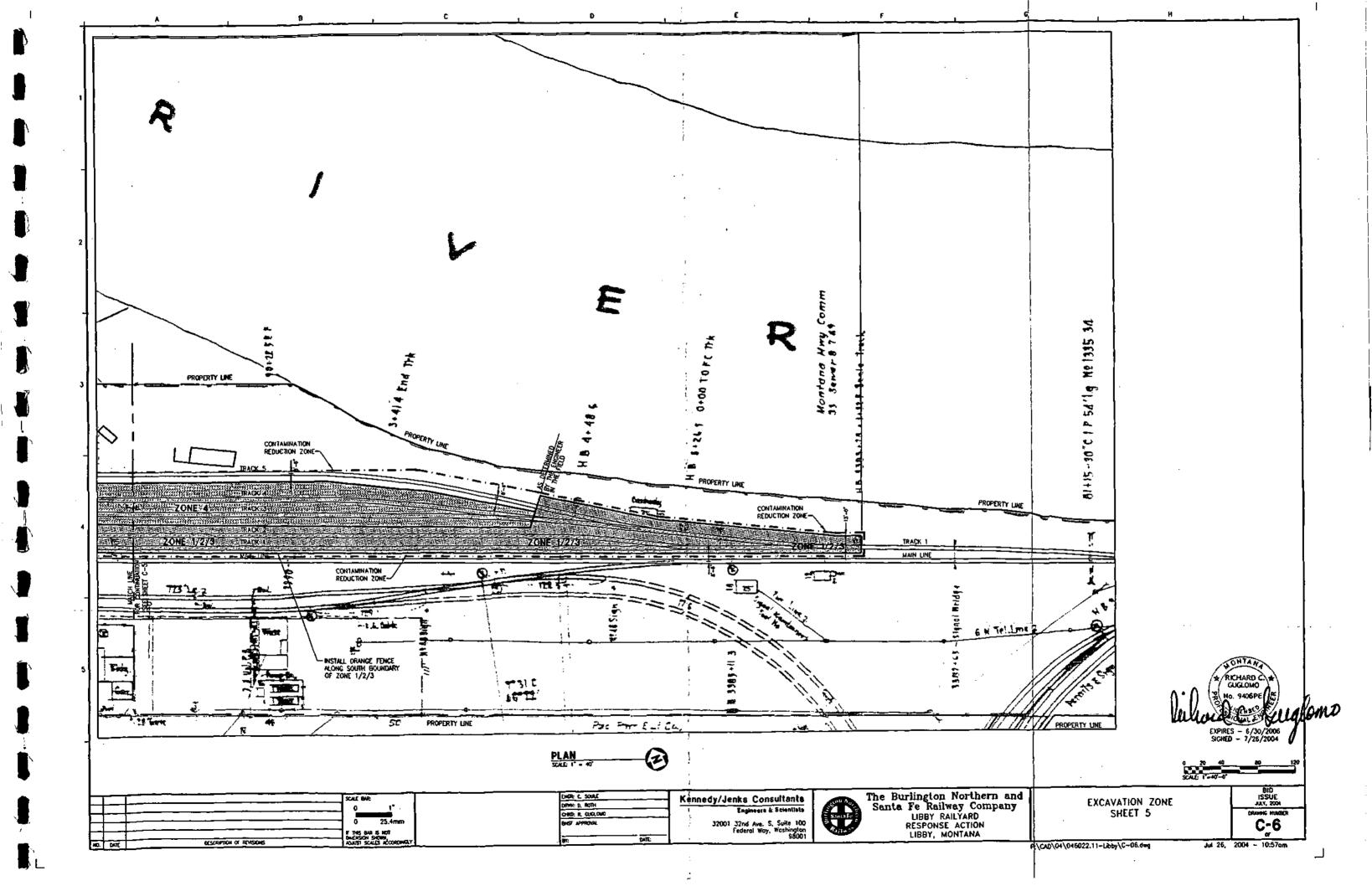


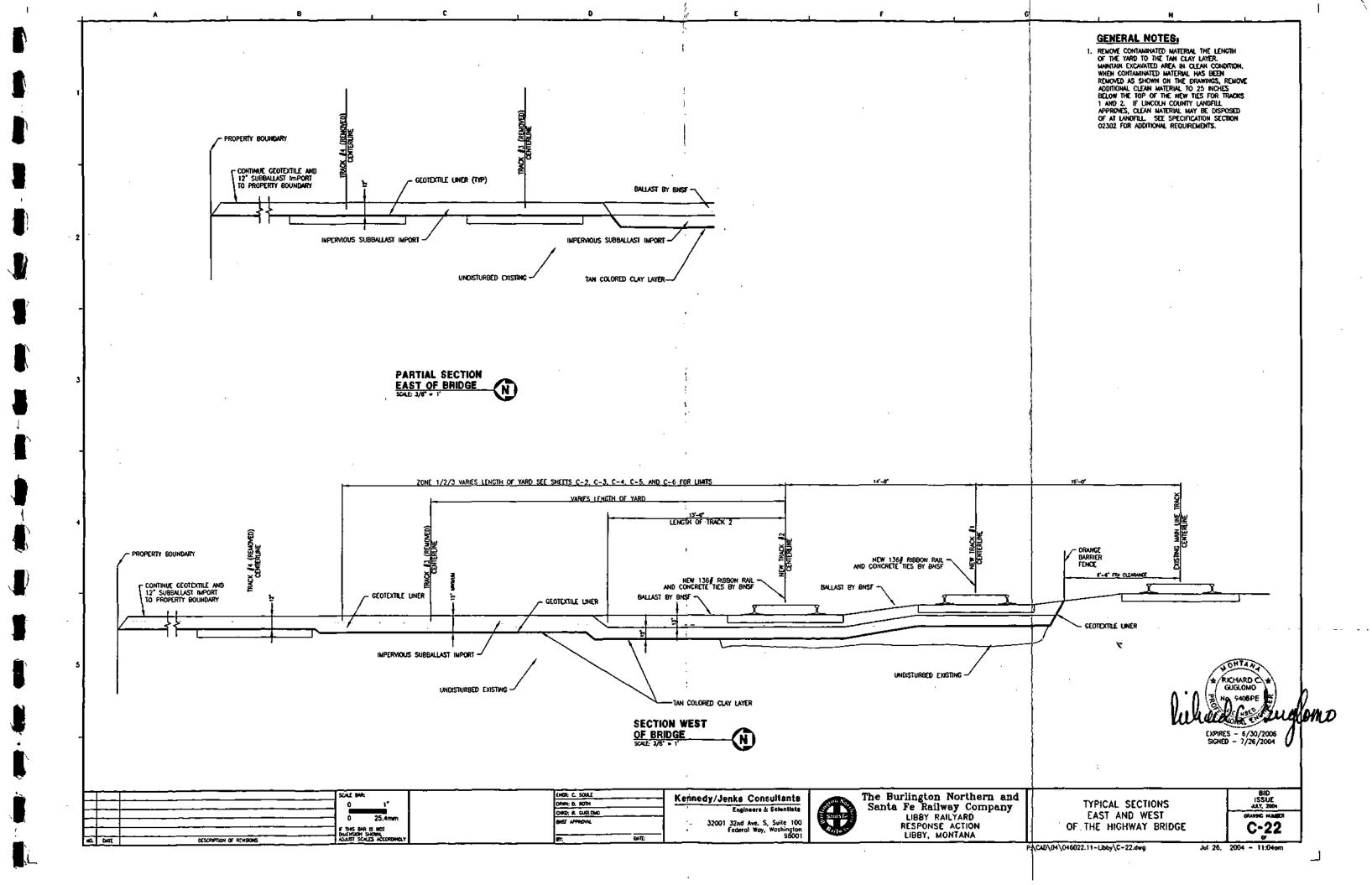












# Appendix B

Request for Information (RFI) Forms

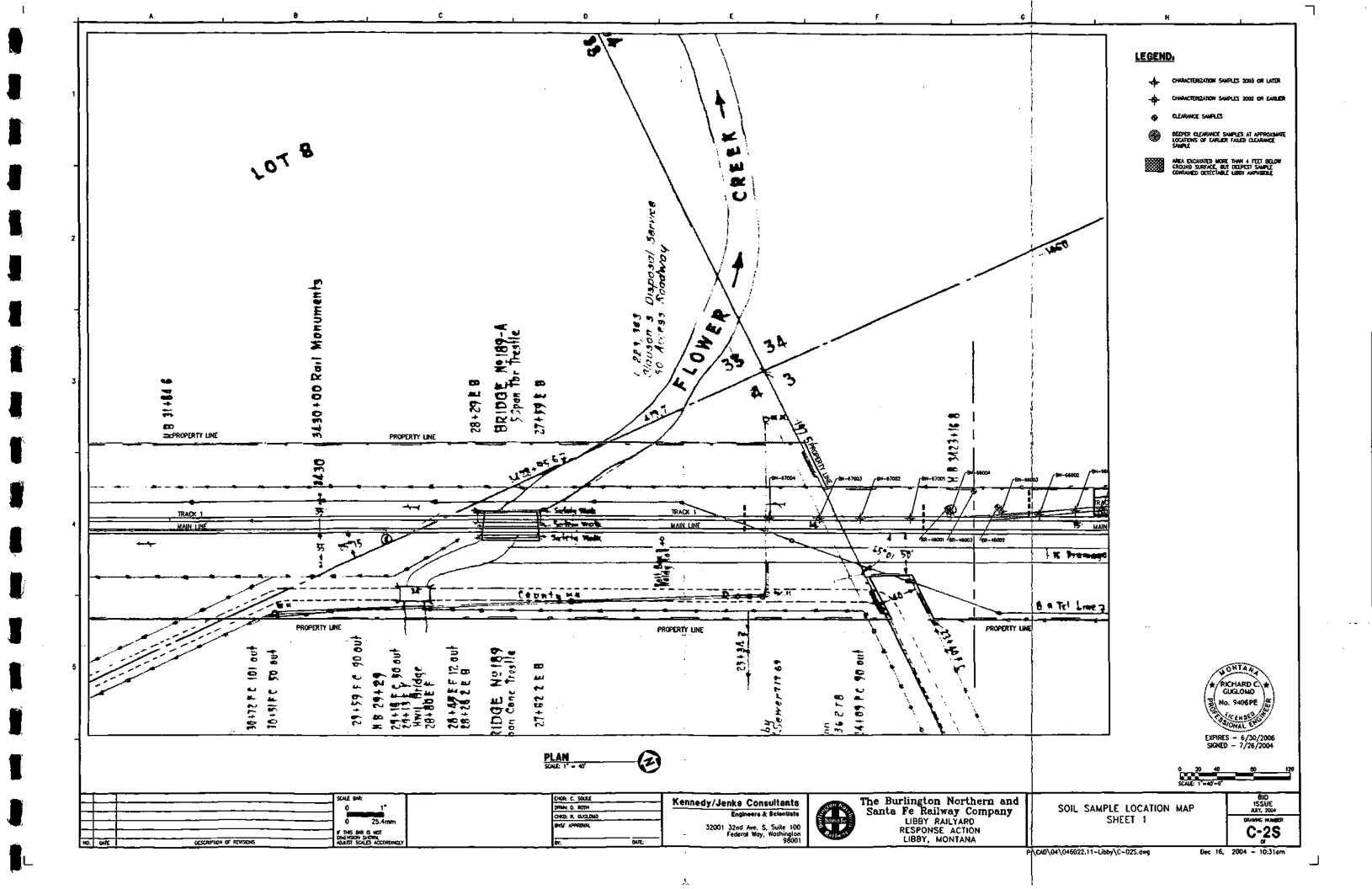
### Libby Asbestos Superfund Site BNSF Libby Rail Yard Response Action 2004 RFI - REQUEST FOR INFORMATION

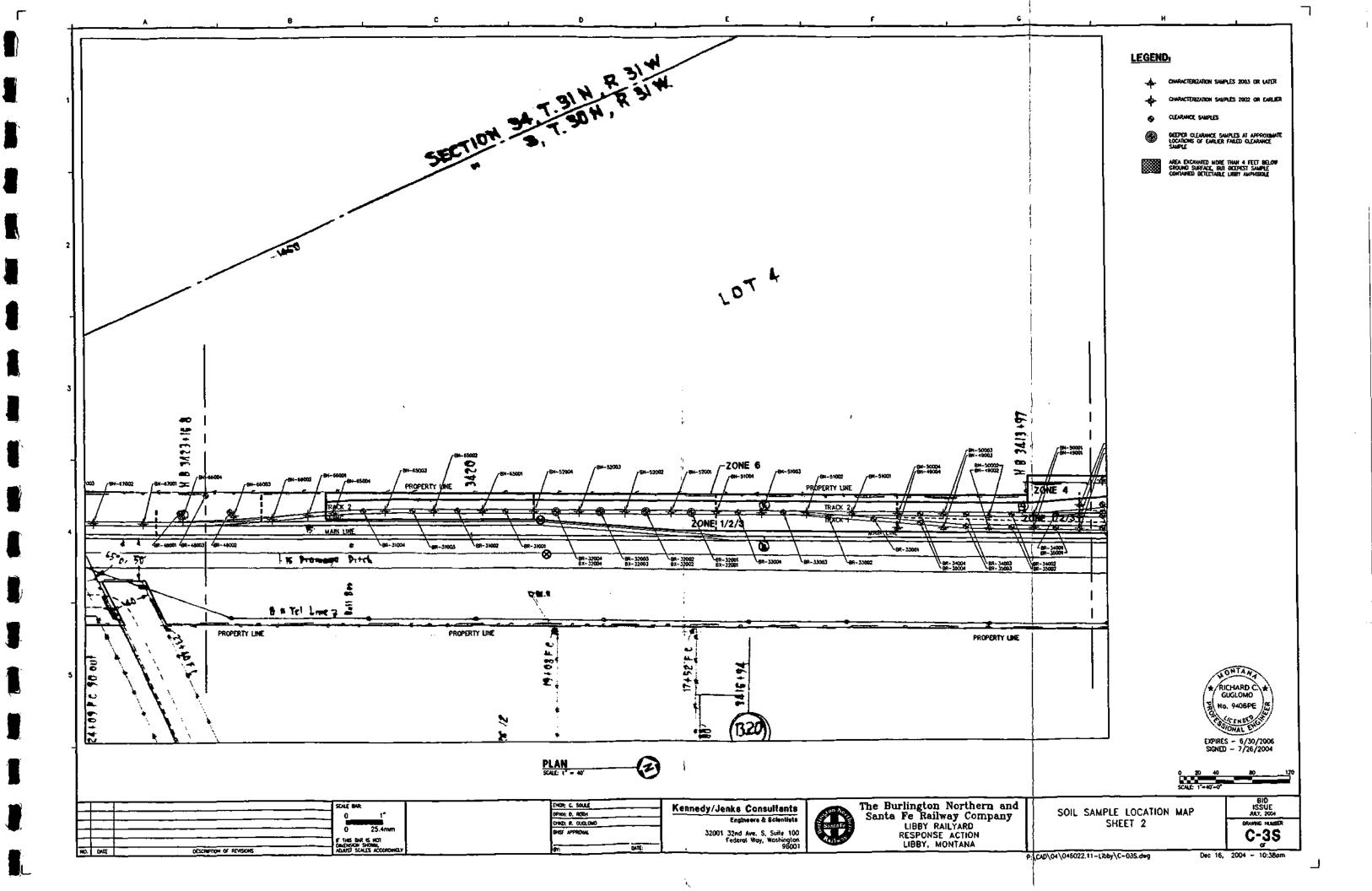
DATE: Sopt. 24, 2004	RFI NO. 2004-1  DNITTATED BY: Kennedy Jenks Consultunts		CONTRACTOR: BNSF (Kemedy/Jenka)	CONTRACT NO.					
CONTRACT DESC Response Action 200	RIPTION: BNSF Libby Rail Yard 14		ATTENTION OF: Jim Caristianson	Region 8 EPA					
Subject: O Electrical	O MECHANICAL X CIVIL	Q	STEUCTURAL/ARCHITECTURAL	O INSTRUMENTATION					
OPERABLE UNIT		REFE ETC:		ATION NO. (FOR DEVIATIONS OR DEFICIENCIES)					
		Drow	ing Sheets C2 through C5						
PROBLEM DES		_							
v laiteteen a soalg ni	vill be brought in from an appro a described for Zones 4, 6 and 7	wed on Soil	nside source, and placed over filt sampled as clean could be used :	andful as "clean" cover disterial. Sub bullest or fabric that will cap the pullicad ties that remain as a sub base to the %-inch minus sub ballast all ambient dust from trucking operations.					
D Eng O Age	ign Deficiency Intering Change Request acy Directive struction Deficiency dula	O Ver O 800 O Cla	nder Material Deficiency	PRP Representative Dave Diem (Kennedy/Jenks Consultants) for BNSF					
RESPONSE/DIR	ECTIVE								
and 7 ares compacted bring the	s. The materia) will be placed of another lift (6-inch minimum	over th thickn s. Run	e filter fabric as originally design cas) of imported %-inch mims b dom composite samples will be	but no more than, 6-inches only in the Zone \$, 6 and then compacted. Once this lift has been use material will be placed and compacted to collected from the "stockpiled" clean soil to serve					
Compaction and low vi	on will be measured by qualitati chicular treffic levels anticipate	ive me d in the	thods (relative compaction) for $Z$ $\epsilon$ firmre.	ones 4, 6 and 7 due to the underlying refbroad ties					
Ensure the soil is used at fabric interface, is no thicken comments than 6", and is covered by at least 6" of in-ported soil.									
Kenngdy/Jenker Date: 2/24/64									
EPA Reprogramativa:	fec	· · · · · · · · · · · · · · · · · · ·	D#	a: 9/79/09					
Construction Ma	Chuck Soule / Kennedy/Jenks nager: Dave Dism / Kennedy/Jenks tiamen / EPA, Courtney Zemors / Vol	ije							
1									

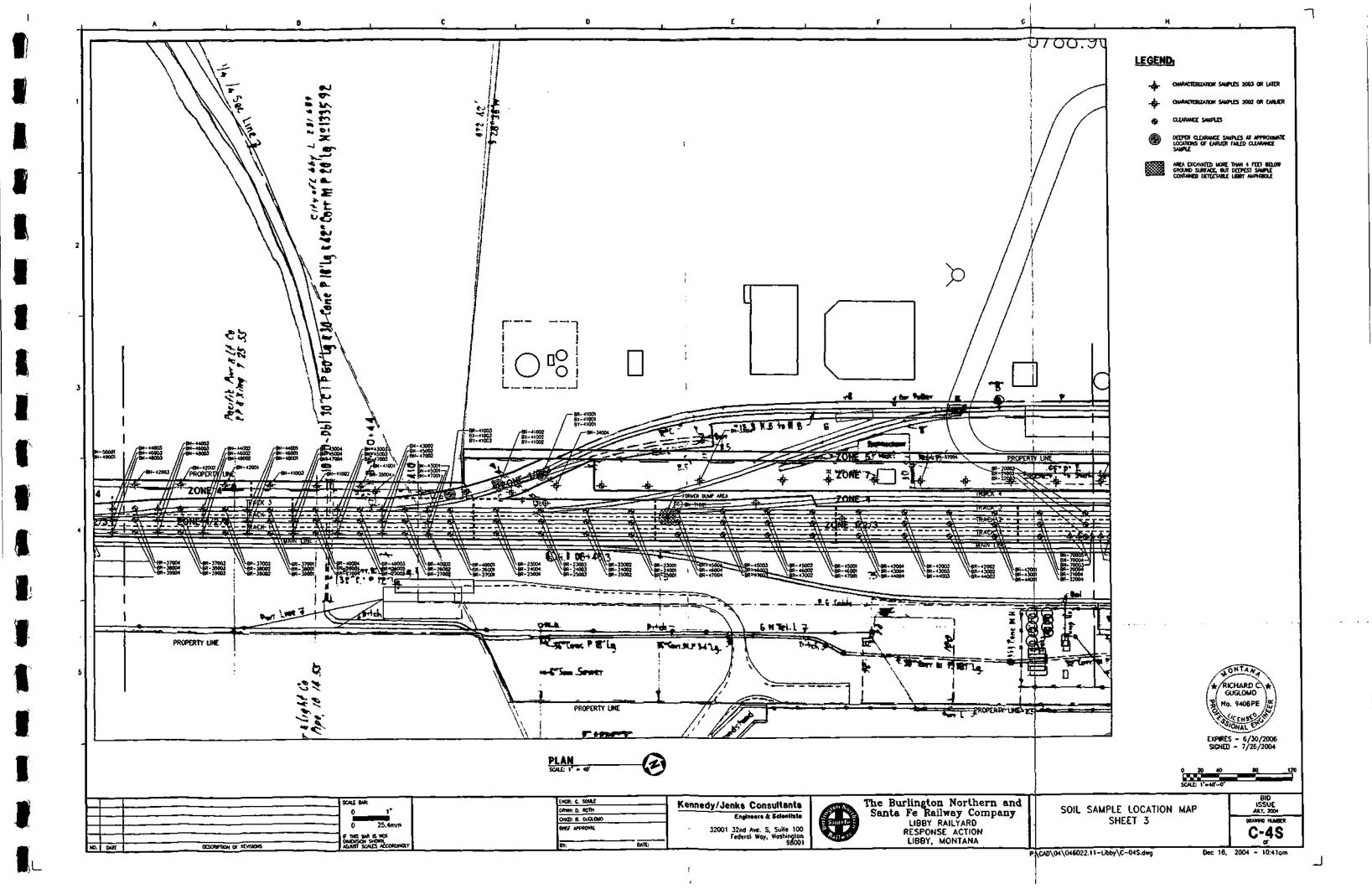
TEL)3033126897

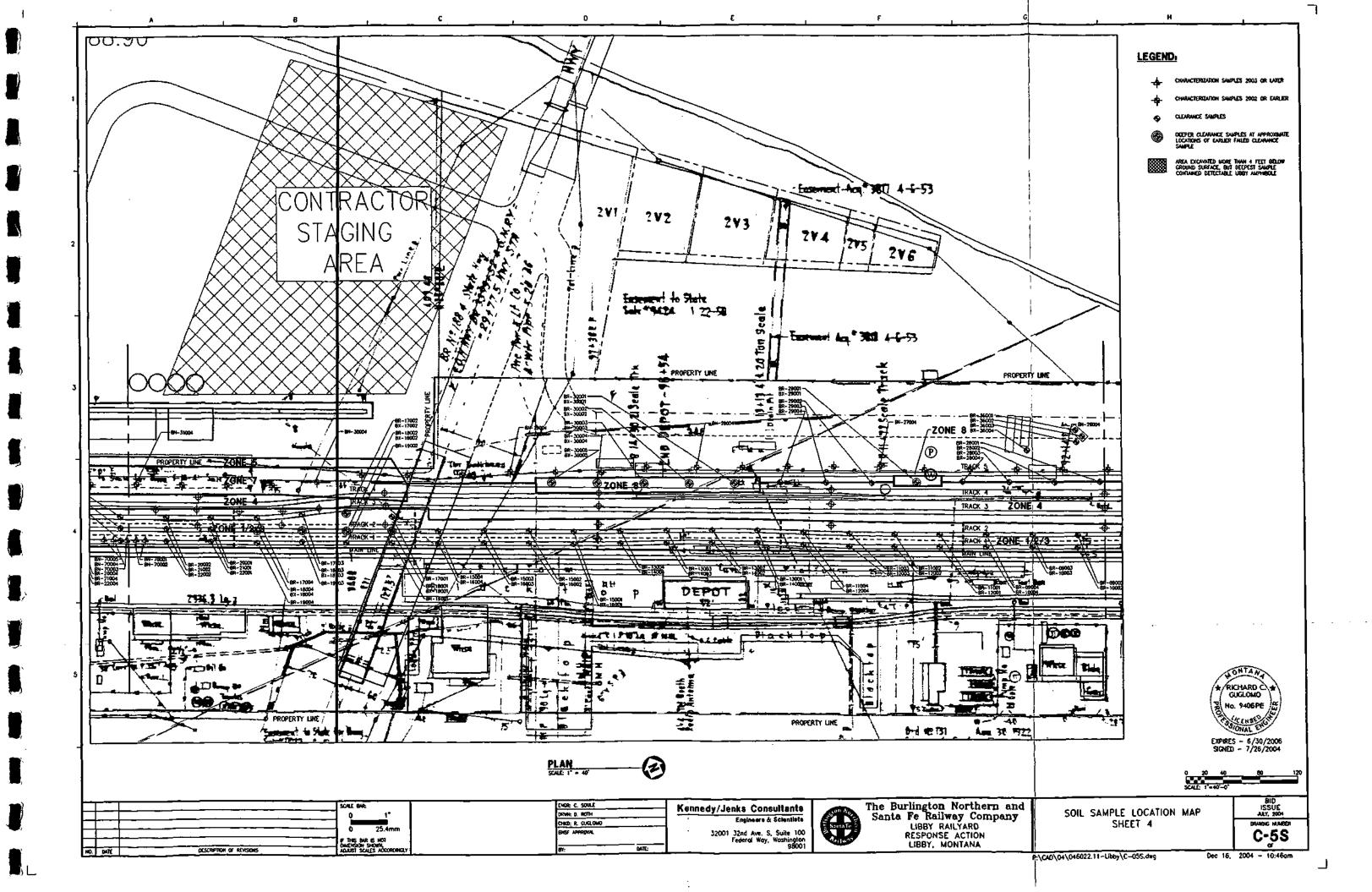
## Appendix C

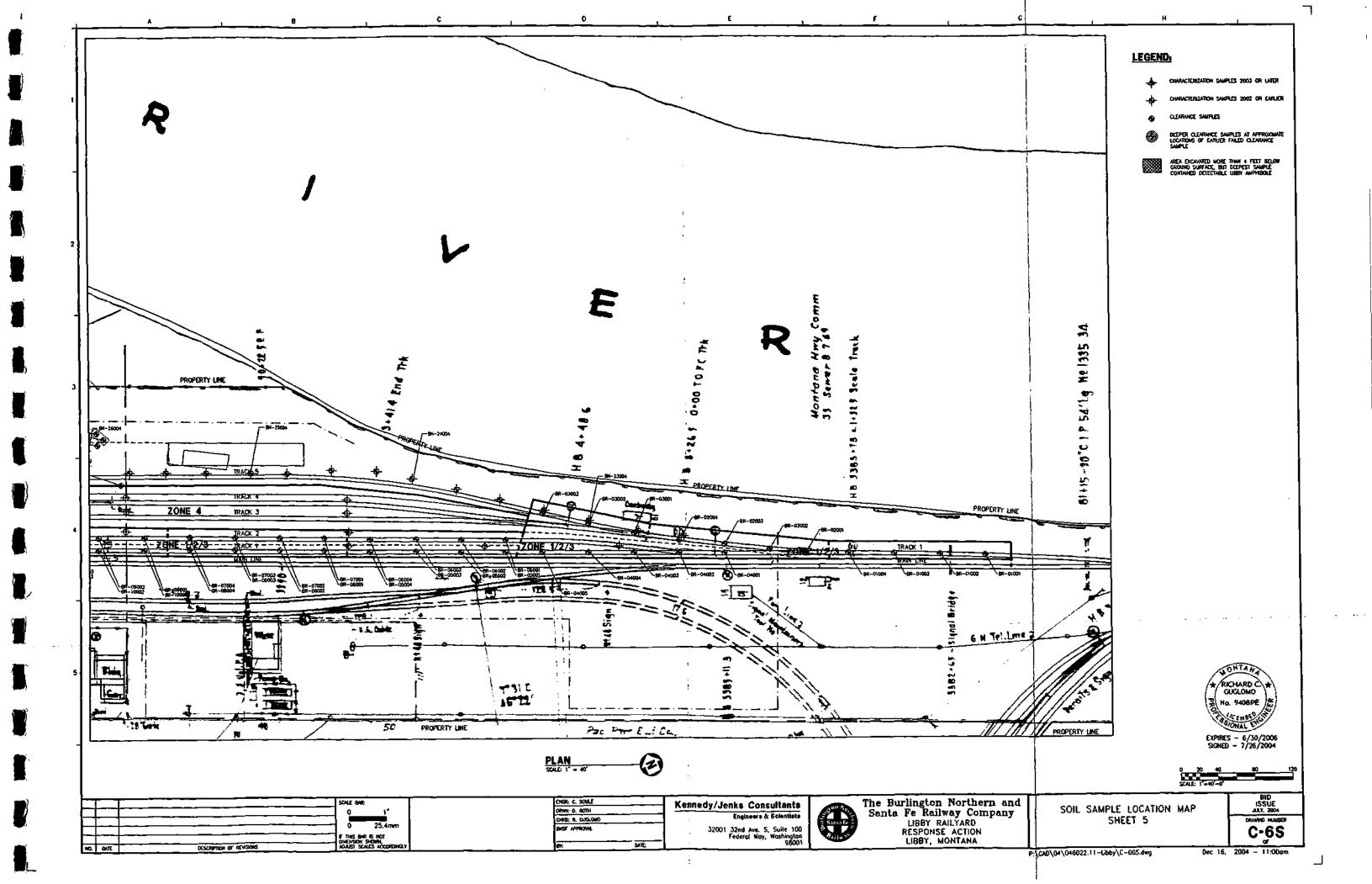
Soil Sample Location Drawings











# Appendix D

**Analytical Data Tables** 

#### Table D-1 Characterization Sell Samples BNSF Libby Rallyard Response Action 2004

1971 11	
March   Marc	Compress
Margins   December	
##   ##   ##   ##   ##   ##   ##   #	
March   Marc	
Section   Proceedings   Section	
No.   P.   P.   Anthonia Schillerford   40,000   100	
CW   Parabeten Schilderford   6,000001   MA   MA   MA   Chyma   5,00   NO	
SW   Dr. a breach (s. d. valour)   A. (1928)   SM   A. (1928)   SM   Dr.	
Beautiful Company   Deal Medical   Act 2009   MA	
Sept	
\$400   \$P\$ streets to the Mercel   \$400	
Bi-circles   Plus Mercels But Method   Crigotine   NA   NA   NA   Cupre   NO   NO   NO   NO   NO   NO   NO   N	
Bi-Critico	
Pic-2000	ожир-)
Ri-54000	comp-2
Ri-50000	40mp-)
Bi-19000	comp-5
Phi-100200	авитр-б
Per-40000	2017—7
B-0-0000    FM 9000, how 2   1791/20091   11 NO NO NO BASE, NA NA NA NA OSA   B-0-00000   FM 9000, how 2   1291/20001   11 NO NP BASE, NA NA NA NA OSA   B-0-00000   FM 9000, how 2   1291/20001   11 NO NP BASE, NA NA NA NA OSA   B-0-00000   FM 9000, how 2   1291/20001   11 NO NP BASE, NA NA NA NA OSA   B-0-00000   FM 9000, how 2   1291/20001   11 NO NO NO BASE, NA NA NA NA OSA   B-0-00000   FM 9000, how 2   1291/20001   10 NO NO BASE, NA NA NA NA OSA   B-0-10000   FM 9000, how 2   1291/20001   10 NO NO NO BASE, NA	comp-8
Bi-1-1000	nosrqo-9 Grid-9 Center
Bit-1990	Ond-9 NW
Ref-100003	Oride? SE
## 1-1900	0-495W
BH-1900	Crist-9 NE comp-10
BP-13000	ecomp-11
BH-14000	comp-12
BH-15900   PLM-1907, INST   1371/2700   MD   ND   ND   DASE_27   MA   NA   NA   NA   NA   NA   NA   NA	comp-1)
BH-18900   PLM 9902, Issue 2   137132901   ND   ND   ND   BMSL27   NA   NA   NA   NA   See	comp-14 exeq-15
BN-1900	comp-16
BN-19000	dump-17
BN-1990    PLM 9902, Issue 2   1571/2001   ND   ND   ND   BASE, NA   NA   NA   Cababa   Cab	оспр-10
Style   Styl	comp-19
BN-1909  PLM 900; Inste 2   12/12/2009  ND ND ND DME   MRIL NA NA NA OHE	Grid-19 Center Grid-19 NW
BN-19000   FLM 9002, Issue 2   15/15/2001   ND   ND   ND   BMS_ NA   NA   NA   Cond- BN-19000   FLM 9002, Issue 2   15/15/2001   41   ND   ND   BMS_ DY   NA   NA   NA   Cond- BN-19000   FLM 9002, Issue 2   15/15/2001   ND   ND   ND   BMS_ DY   NA   NA   NA   NA   Cond- BN-19000   FLM 9002, Issue 2   15/15/2001   ND   ND   ND   ND   BMS_ NA   NA   NA   NA   Cond- BN-19000   FLM 9002, Issue 2   13/15/2001   ND   ND   ND   ND   BMS_ NA   NA   NA   NA   Cond- BN-19000   FLM 9002, Issue 2   13/15/2001   ND   ND   ND   BMS_ NA   NA   NA   NA   Cond- BN-19000   FLM 9002, Issue 2   13/15/2001   ND   ND   ND   BMS_ NA   NA   NA   Cond- BN-19000   FLM 9002, Issue 2   13/15/2001   ND   ND   ND   BMS_ NA   NA   NA   Cond- BN-19000   FLM 9002, Issue 2   13/15/2001   ND   ND   ND   BMS_ NA   NA   NA   Cond- BN-19000   FLM 9002, Issue 2   13/15/2001   ND   ND   ND   BMS_ NA   NA   NA   Cond- BN-19000   FLM 9002, Issue 2   13/15/2001   ND   ND   ND   BMS_ NA   NA   NA   Cond- BN-19000   FLM 9002, Issue 2   13/15/2001   ND   ND   ND   BMS_ NA   NA   NA   Cond- BN-12000   FLM 9002, Issue 2   13/15/2001   ND   ND   ND   BMS_ NA   NA   NA   NA   BN-12000   FLM 9002, Issue 2   11/15/2002   A1   ND   ND   BMS_ NA   NA   NA   NA   BN-12000   FLM 9002, Issue 2   11/15/2002   A1   ND   ND   BMS_ NA   NA   NA   BN-12000   FLM 9002, Issue 2   11/15/2002   A1   ND   ND   BEST   NA   NA   NA   BN-12000   FLM 9002, Issue 2   11/15/2002   A1   ND   ND   REST   NA   NA   NA   BN-12000   FLM 9002, Issue 2   11/15/2002   A1   ND   ND   REST   NA   NA   NA   BN-12000   FLM 9002, Issue 2   11/15/2002   A1   ND   ND   REST   NA   NA   NA   BN-12000   FLM 9002, Issue 2   11/15/2002   A1   ND   ND   REST   NA   NA   NA   BN-12000   FLM 9002, Issue 2   11/15/2002   A1   ND   ND   REST   NA   NA   NA   BN-12000   FLM 9002, Issue 2   11/15/2002   A1   ND   ND   REST   NA   NA   NA   BN-12000   FLM 9002, Issue 2   11/15/2002   A1   ND   ND   REST   NA   NA   NA   BN-12000   FLM 9002, Issue 2   11/15/2002   A1   ND   ND   REST   NA   NA   NA   BN-12000	(Irid-19 NE
BN-2000	Grid-19 SE
BN-2002  PLA 902, how 2   12/12/2001 ND ND ND D4SL NA NA NA NA Cond. 31   12/12/2001 ND ND ND D4SL NA NA NA NA Cond. 31   12/12/2001 ND ND ND D4SL NA	CHA-IDSM
BN-12007	comp-30
BH-30003	Cend-20 NW
SH-2000  PLM 9002, Issue 2   12/12/2001   ND   ND   EMSL27   NA   NA   NA   Grid-	Grid-20 NE
BN-21000   FLM 9002, Issue 2   12/12/2001   ND   ND   ND   EMSL27   NA   NA   NA   om	Cnd-20 SE
BN-25000	Cmd-30.9W comp-21
BN-25000	оттр-22
BN-28001   YLM 9002, Issue 2   1/2/2003   41 ND ND RESI NA NA NA NA BN-28002   PLM 9002, Issue 2   1/2/2003   41 ND ND RESI NA NA NA NA BN-28004   PLM 9002, Issue 2   1/2/2003   41 ND ND RESI NA NA NA NA NA BN-28004   PLM 9002, Issue 2   1/2/2003   41 ND ND RESI NA NA NA NA NA BN-28000   PLM 9002, Issue 2   1/2/2003   41 ND ND RESI NA NA NA NA NA BN-28000   PLM 9002, Issue 2   1/2/2003   41 ND ND RESI NA NA NA NA NA BN-28000   PLM 9002, Issue 2   1/2/2003   41 ND ND RESI NA NA NA NA NA BN-28000   PLM 9002, Issue 2   1/2/2003   41 ND ND RESI NA NA NA NA NA BN-28002   PLM 9002, Issue 2   1/2/2003   ND ND ND RESI NA NA NA NA NA BN-28002   PLM 9002, Issue 2   1/2/2003   ND ND ND RESI NA NA NA NA BN-28003   PLM 9002, Issue 2   1/2/2002   ND ND ND RESI NA NA NA NA BN-28004   PLM 9002, Issue 2   1/2/2002   ND ND ND RESI NA NA NA NA BN-28004   PLM 9002, Issue 2   1/2/2002   ND ND ND RESI NA NA NA NA BN-28000   PLM 9002, Issue 2   1/2/2002   ND ND ND RESI NA NA NA NA BN-28000   PLM 9002, Issue 2   1/2/2002   ND ND ND RESI NA NA NA NA BN-28000   PLM 9002, Issue 2   1/2/2002   ND ND ND RESI NA NA NA NA BN-28000   PLM 9002, Issue 2   1/2/2002   ND ND ND RESI NA NA NA NA BN-28000   PLM 9002, Issue 2   1/2/2002   ND ND ND RESI NA NA NA NA BN-28000   PLM 9002, Issue 2   1/2/2002   ND ND ND RESI NA NA NA NA BN-28000   PLM 9002, Issue 2   1/2/2002   ND ND ND RESI NA NA NA NA BN-28000   PLM 9002, Issue 2   1/2/2002   ND ND ND RESI NA NA NA NA BN-28000   PLM 9002, Issue 2   1/2/2002   ND ND ND RESI NA NA NA NA BN-28000   PLM 9002, Issue 2   1/2/2003   ND ND ND RESI NA NA NA NA NA BN-280000   PLM 9002, Issue 2   1/2/2003   ND ND ND RESI NA NA NA NA NA BN-28000   PLM 9002, Issue 2   1/2/2003   ND ND ND RESI NA NA NA NA NA BN-280000   PLM 9002, Issue 2   1/2/2003   ND ND ND RESI NA NA NA NA NA BN-280000   PLM 9002, Issue 2   1/2/2003   ND ND ND RESI NA	
BN-25002   PLM 9002, Issue 2   172/2003   <1   ND   ND   RES1   NA   NA   NA   NA   BN-25004   PLM 9002, Issue 2   172/2003   <1   ND   ND   RES1   NA   NA   NA   NA   NA   BN-25004   PLM 9002, Issue 2   172/2002   <1   ND   ND   RES1   NA   NA   NA   NA   NA   NA   BN-26000   PLM 9002, Issue 2   172/2002   <1   ND   ND   RES1   NA   NA   NA   NA   NA   NA   RES1   NA   NA   NA   NA   NA   NA   RES1   NA   NA   NA   NA   NA   NA   NA   N	
BN-25001   PLM 9002, Issue 2   172/2003   41   ND   ND   REST   NA   NA   NA   NA   BN-25006   PLM 9002, Issue 2   172/2003   41   ND   ND   REST   NA   NA   NA   NA   NA   BN-25006   PLM 9002, Issue 2   172/2002   41   ND   ND   REST   NA   NA   NA   NA   NA   NA   NA   N	
BN-21004	
BN-24001   FUM 9002, Issue 2   17/2002   <1   ND   ND   REST   NA   NA   NA   NA   BN-24002   FUM 9002, Issue 2   17/2003   ND   ND   ND   REST   NA   NA   NA   NA   NA   NA   NA   N	
BN-24002   PLM 9002, Issue 2   17/25003   ND   ND   RES  NA   NA   NA   NA   NA   NA   NA   NA	
8N-24002   PLM M00, Inver 2   16/2003   ND   ND   ND   RES  NA   NA   NA   NA   RN-24003   PLM 9002, Issue 2   16/2002   ND   ND   ND   ND   RES  NA   NA   NA   NA   NA   NA   NA   NA	
BN-24004	
BN-25000	
BN-26000   F1,M 9002, base 2   11/26/2002   ND   ND   ND   RES    NA   NA   NA   NA   RA   RA   RA   R	
BN-27000   FLM 9002, has 2   11/26/2002   ND   ND   ND   RES    NA   NA   NA   NA   BN-28000   FLM 9002, has 2   31/26/2002   ND   ND   ND   RES    NA   NA   NA   NA   NA   NA   NA	
BN-25000   PLM 5002, Issue 2   11/26/2002   ND   ND   ND   RESI   NA   NA   NA   NA   BN-35000   PLM 5002, Issue 2   11/26/2002   <1   ND   ND   RESI   NA   NA   NA   NA   NA   NA   NA   N	
BN-30000   PLM 9002, Issue 2   1176/2002   41 ND ND RESI NA NA NA NA BN-30000   PLM 9002, Issue 2   1176/2002   41 ND ND RESI NA NA NA NA BN-30000   PLM 9002, Issue 2   172/2003 ND ND ND ND RESI NA NA NA NA BN-30000   PLM 9002, Issue 2   172/2003 ND ND ND ND RESI NA NA NA NA BN-30000   PLM 9002, Issue 2   172/2003 ND ND ND RESI NA NA NA NA BN-30000   PLM 9002, Issue 2   172/2003   41 ND ND RESI NA NA NA NA BN-30004   PLM 9002, Issue 2   172/2003   41 ND ND RESI NA NA NA NA BN-31000   PLM 9002, Issue 2   172/2003   41 ND ND RESI NA NA NA NA BN-31000   PLM 9002, Issue 2   172/2003   41 ND ND RESI NA NA NA NA BN-31000   PLM 9002, Issue 2   172/2003   41 ND ND RESI NA NA NA NA BN-31001   PLM 9002, Issue 2   172/2003   41 ND ND RESI NA NA NA NA BN-31001   PLM 9002, Issue 2   172/2003   41 ND ND RESI NA NA NA NA BN-31001   PLM 9002, Issue 2   172/2003   41 ND ND RESI NA NA NA NA NA BN-31001   PLM 9002, Issue 2   172/2003   41 ND ND RESI NA NA NA NA	
EN-30000 P2-M 9002 (state 2 11/26/2002 <1 MD ND NESI NA NA NA NA BH-31000) P1-M 9002, base 2 1/2/2003 ND ND ND ND NB RESI NA NA NA NA BH-30000 P1-M 9002, base 2 1/2/2003 ND ND ND ND RESI NA NA NA NA BH-30000 P1-M 9002, base 2 1/2/2003 <1 ND ND RESI NA NA NA NA BH-30000 P1-M 9002, base 2 1/2/2003 <1 ND ND RESI NA NA NA NA BH-30004 P1-M 9002, base 2 1/2/2003 <1 ND ND RESI NA NA NA NA BH-31000 P1-M 9002, base 2 1/2/2003 <1 ND ND RESI NA NA NA NA BH-31000 P1-M 9002, base 2 1/2/2003 <1 ND ND RESI NA NA NA NA BH-31000 P1-M 9002, base 2 1/2/2003 <1 ND ND RESI NA NA NA NA BH-31000 P1-M 9002, base 2 1/2/2003 <1 ND ND RESI NA NA NA NA BH-31000 P1-M 9002, base 2 1/2/2003 <1 ND ND RESI NA NA NA NA NA BH-31000 P1-M 9002, base 2 1/2/2003 <1 ND ND RESI NA NA NA NA	
BN-30001   PLM 9001, Issue 2   1/2/2003   ND   ND   ND   RESI   NA   NA   NA   NA   NA   NA   NA   N	
BN-30000	
EN-30004   PLM 9002; Exam 2   1/2/2003   <1 ND ND REST NA NA NA NA BN-31000   PLM 9002; Exam 2   11/26/2002   <1 ND ND REST NA NA NA NA BN-31000   PLM 9002; Exam 2   11/2/2003   <1 ND ND REST NA NA NA BN-31000   PLM 9002; Exam 2   1/2/2003   <1 ND ND REST NA NA NA NA BN-31000   PLM 9002; Exam 2   1/2/2003   <1 ND ND REST NA NA NA NA NA	
BN-31000   PU-M 9001, tansis 2   11/26/2002   <1   ND   ND   REST   NA   NA   NA   REST   NA   NA   NA   NA   REST   REST   NA   NA   NA   REST   RA   RA   RA   RA   RA   RA   RA   R	
BH-31001	
BN-3100) FLM 9002, 2cas 2 1/2/2003 <1 ND ND RESI NA NA NA	
99-1-31002   PLM 9002 Issue ?   1/2/2009   <1   ND   MD   RESI   NA   NA   NA	
\$1-31003	
BN-32000 PLM-990Q, Issue 2 1326/2002 <t kest="" na="" na<="" nd="" td=""><td></td></t>	
BN-32001 PLM 9002 brus 2 1/2/2003 <1 ND ND REST NA NA NA	
8N-3/2002 PLM 90002, boar 2 1/2/2003 < ND ND ND RESI NA NA NA	
HN-32003	
EN-32004   PLM 9002, Lunus 2   1/2/2003   <1 ND ND REST NA NA NA NA NA BN-32004   PLM 9002, Lunus 2   1/2/2003   <1 ND ND REST NA NA NA NA	
BN-33000 PLM-9002, Janus 2 81/26/2002 <1 ND ND REST NA NA NA	
BP-33001 PLM 9002, base 2 (7270003 <1 ND ND REST NA NA NA	
BN-33002 PLM-9001, Issue 2 17/2009 <1 ND ND 9251 NA NA NA	
BN-33009   PLM-9901_ hous 2   6/2/2009   41 ND ND REST NA NA NA NA NA BR-33004   PLM-9001_ beam 2   6/2/2009   41 ND ND REST NA NA NA NA	
BN-34000 PLM 9002 Rate 2 11/2/2002 <1 ND ND RESI NA NA NA	
BN-34001 PLM 9002, house 2 1/2/2009 <1 ND ND REST NA NA NA	
BN-34002 PLM 9002 lases : 67/2003 <1 ND ND BEST NA NA NA	Prepara

Table D-1 Characterization Soll Samples BNSF Libby Railyard Response Action 2004

Index ID	Analytical Sterbod	Date Received by Laboratory	Tremal#e-Artholite (%) <sup>1</sup>	(%) Chrysolle	Other Amphiliales (%)	מען.	PLM Result	PLM (%F) Result	TEM (%F) Result	Comments
BN-34003	PLM 9002, Isom 2	1/2/2003	<1	ND	ND	RĒSI	NA	NA.	NA	
BN-34004	PLM 9002, bsee 2	1/2/2001	∢ι	, ND	ND	RESI	NA.	NA.	NA	
BN-34004	PLM 9002, large 2	1/2/2003	<1	MD	9	REST	NA NA	NA	NA.	
BN-35000	PLM 9002, lemes 2	11/26/2002	<1	, kab	ND	RESI	NA NA	NA .	NA.	
BM-35001	PLM 9002, base 2	1/2/2003	- 4	(f)	8	RESI	NA	NA.	NA	
BN-35002	PLM 9002, Issue 2	1/2/2003	<۱	ND	ND	RESI	NA .	NA.	NA_	<u> </u>
BN-35003	PLM 9002, favor 2	1/2/2003	4	ND	ND _	RESI	NA .	. NA	NA_	
BN-35004	PLM 9002, larer 2	1/2/2003	4	ND:	ND	RESI	NA.	HA.	NA .	
BN-N6000	PLM 9002, larer 2	11/26/2002	ND ND	<u> </u>	<u> </u>	REST	NA MA	NA NA	NA NA	
BN-37000	PLM 9002, lense 3	11/26/2002	MD		<u> </u>		NA	NA Ma	NA_	
T3-00001	PLM 9002, brue 2 PLM 9002, brue 2	8/13/2003	ND NO	ND	ND	EMSL27	NA NA	NA NA	NA NA	
T4-00003 BN-38000	PLM 9002, lense 2	6/13/2003	MD.	ND ND	<u></u>	EMSL27 EMSL27	NA NA	NA.	NA.	
BN-3800t	PLM 9002, base 2	9/15/2009 9/15/2003	2	פא	- <del>1</del>	EMSL27	NA.	NA	NA NA	
BN-38001	PLM 9002, house 2	B/15/2003	ND	ND ND	<b>19</b>	EMSL27	NA.	NA NA	NA.	-
BN-34003	PLM 9002, Issue 2	B/15/2003	2	. ND	MD _	EMS).27	NA.	NA NA	NA .	
BN-38004	PLM 9007, Esser 2	0/15/2003	<1	ND ND	ND	EMSL17	NA	NA	HA	
BN-34005	PLM 9002, laster 2	B/15/7003	2	ND	5	EMSL27	NA.	NA	NA	
BN-39000	PLM 9002, Issue 2	9/(8/2005	2	. ND.	MD	EMS1,27	NA -	NA NA	24	
BN-39001	PLM 9002, Israe 2	\$/18/2003	2	ND	ND	EMSL17	NA I	NA	NA.	
BN-39002	PLM 9002, larne 2	3/18/2003	ND	ND	ND	EMSL27	NA	NA	NA .	
BN-39003	PLM 9002, Isom 2	0/18/2003	2	D GZ	N9	EMSL#7	NA .	. NA	NA	
BN-39004	PLM 9002, fauce 2	8/18/2003	ND.	NU	ND	EMSL 27	NA.	NA	NA_	
BN-39005	PLM 9002, Issue 2	8/18/2003	_ <1	М	8	EMSL27	. NA	NA	NA_	
BN-40000	PLM 9002. Issue 2	8/18/2003	2	ND	ND	EMSL27	NA	NA	NA .	
BN-40001	PLM 9002, laner 2	B/18/2003	2		MD_	EM51.27	NA NA	NA	NA_	
BN-40002	PLM 9002, Imm 2	8/18/2003	2	ND	. ND	EMS1.27	NA NA	NA	NA_	
BN-4000)	PLM 9002, base 2	B/16/2003	- 3	ND '	ND _	EMSL27	NA DA	NA NA	HA_	· · · · ·
BN-4000#	PLM 9002, base ?	8/38/2003	_ <	ND	ND .	EM3L27	NA NA	NA NA	NA.	
BN-40005	PLM 9002, Israe 2 PLM 9002, Israe 2	8/18/2003	۷.	ND:	MD _	EM5L27	NA NA	NA.	NA NA	
BN-00123	PLM 9002, lame 2	8/20/2003	470	ND	MD	EMSL27 EMSL27	NA.	NA.	NA NA	
BN-00124 BN-00125	PLM 9002, lum 1	\$/20/2003 \$/20/2003	ND D	ND ND	ND ND	EMSL27	NA NA	NA.	NA.	
BN-00126	PLM 9002, have 3	6/20/2003	ND	מא	MD _	EMSL27	NA .	NA NA	NA NA	
BN-00127	PLM 9002, base 2	8/20/2003	ND ND		ND _	EMSL2)	NA.	NA NA	NA.	
BN-00120	PLM 9002 hair 2	8/20/2003	ND	MD	ND .	EMSLT?	NA	NA	NA .	
BN-00129	FLM 9002, favor 2	8/20/2009	DИ	МĐ	MD	EMSL27	NA NA	NA I	NA.	
BN-00130	PLM 9002, lanar 2	B/20/2003	ND.	63	20	EMSL27	NA	NA	NA	
BN-90131	PLM 9002, large 2	6/20/2009	ND	9	2	EMSL27	NA.	NA	NA.	
EN-00132	PLM 9002, lesse 2	8/20/2003	ND	ND	ND _	EMSL27	NA I	NA	MA	
BN-41000	PLM 9003, Ratus 2	7/14/2004	۹ (	ND	ND	EMSL27	NA NA	NA.	NA	Split of BN-33000
BN-42000	FLM 9002, have 2	7/14/2004	4	ND	ND	EMSL27	NA.	N'A	NA.	Split of BN-54000
BN-43000	P1.M 9002, lense 2	7/14/2004	ND	ND	ND _	FMSL27	NA	NA.	NA	Sphi of BN-55000
BN-44000	PLM 9003. hate 2	7/14/2004	<1	ND	ND	EMSL27	NA .	NA	NA	Split of BN-56000
BN-45000	FLM 9003, have 2	7/14/2004	∢(	ND	. ND	EMSL27	NA NA	NA	NA .	Split of BN-57000
EN-46000	PLM 9002, hour 2	7/14/2004	<u> </u>	. ND	MD	EMSL27	NA NA	NA.	NA .	Sphi of BN-50000
BN-47000	PLM 9002, famir 2	7/14/2004		ND ND	ND .	EMSL27	NA NA	. NA	NA_	Spří of BN-59000
BN-49000	PLM 9002, Essie 2 PLM 9002, Essie 2	7/14/2004	ND	ND ND	<u> </u>	EMSL27	NA NA	NA NA	NA NA	Sph) of BN-60000
BN-49000	PLM 9002, brase 2	2/)4/2004	ND ND	ND MD	ND ND	EMSL27 EMSL27	NA NA	NA NA	NA.	Split of BN-61000
BN-50000 BN-51000	PLM 9002, laver 2	7/14/2004	ND 47	25 25	7D _	EMSL27	NA.	NA.	- NA	Splik of BN-62000 Splik of BN-63000
BN-52000	PLM 9002, listue 2	7/14/2004		ND CM	OBK	DMSL27	NA I	NA.	NA NA	Spik of BN-64000
BN-52000 BN-52000	PLM 9002- VE	7/28/2004	ND:	ND	- PD	EMSLO	NA.	NA NA	NA.	Split of BN-41000
9N-34000	PLM 9002- VE	7/28/2004	ND	ND	ND	EMSL04	NA.	NA NA	NA.	5pth of BN-22000
9N-35000	PLM 9002- VE	7/28/2004	ND.	70	10	EMSL04	NA	NA	NA	Split of BN-43000
BN-36000	PLM 9002- VE	7/28/2004	ND	ND	סא	EMSLO•	NA	NA .	NA .	Split of BN-44000
BN-37000	PLM 9002- VE	7/28/2004	10	מא	. <b>G</b> K	EMSLO	NA.	NA	NA.	Split of BN=43000
EN-58000	PLM 9002- VE	7/28/2004	Tr	ND	ND	EMSLO	NA	NA.	NA	Spin of BN-46000
9N-39000	PLM 9002- VE	7/28/2004	ND	ND.	QX	EMSLO	NA	NA .	NA .	Split of BN-47000
BN:60000	PLM 9002- VE	7/28/2004	ND.	ND	D 034	EMSL04	NA.	NA	NA_	Split of BN ≠8000
BN-61000	71_M 9002- VE	7/28/2004	ND	ND	ND -	EMSL04	NA NA	NA.	NA	Split of BN-49000
BN-62000	PLM 9002- VE	7/28/2004	OM	ND	ND	EMSLM Date of	NA.	NA I	NA.	Splik of BN-30000
9N-53000	PLM 9002- VE	7/78/2004	77	ND:	- 20	EMSL04 EMSL04	NA NA	NA NA	NA NA	Sphi o(BN-51000
BN-64000	PLM 9002- VE PLM 9002, brue 2	7/28/2004 9/9/2004		ND ND	<u> </u>	EMSL04	NA NA	NA NA	NA NA	Split of BN-52000
BN 45000 BN 46000	PLM 9002, lowe 2	9/9/2004	<1	ND 1	ND ND	EMSL04	NA NA	NA NA	NA NA	
BN-66001	PLM 9002, Rate 2	9/9/2004	150	ND ND	ND _	EMSL04	NA NA	NA NA	NA NA	
BN-66002	PLM 9002, boar 2	9/9/2004	ND ND	, ND	ND	EMSL04	NA NA	- NA	NA	
BN-66003	PLM 9002, brac 2	9/9/2004	41	ND .	ND ND	EMSLO	NA.	NA NA	NA.	
BN-66004	PLM 9002, hour 2	9/9/2004	46	ND D	ND	EMSLG4	NA.	NA NA	NA NA	
374-67000	PLM 9002, base 2	9/9/2004	NO	NTD	ND	EMSL04	NA	NA NA	NA.	
951-69001	FLM 9002, leave 2	9/14/2004	ND	NTD	- COX	EMSLO	_ NA	NA.	NA	
BN-70001	PLM 9002, lisma 2	9/24/7004	ND ON	ND:	100 100	EMSL04	NA.	NA.	NA _	
BN-70002	PLM 9002, lasm J	9/24/2004	41	ND	NO	EMSL04	NA	NA NA	NA.	
EN-70003	PLM 9002, hwee 2	9/24/2004	∢1	ND	70	EMSL04	NA.	NA.	NA NA	
	PLN: 9002, bane 2	9/24/2004	<1	ND	ND	EMSLO	NA.	NA NA	NA NA	
BN-70004										
BN-70004 BN-70003	PLM 9002, base 2	9/24/2004	ND	ND ND	MD	EMSL04	NA	NA	NA	

Libby Amphibole % on FLM 9002-VE Sample Method
 Samples were analyzed by EPA 600 and TEM Semi-quadritative
NA-Not Analyzed, Not Available
ND-Not Descred
TR-Trace

Table D-2 Clearance Soil Samples BNSF Libby Railyard Response Action 2004

Sample ID	COC Number	Appearance	Aualytical Method	Date Collected	Date Analyzed	Ashestos Percentage	Asbestos Type
BR-01000	B0015	Brown, Tan Fibrous Homogeneous	9002, Issue 2 <sup>1</sup>	9/15/2004	9/16/2004	ND	NA
BR-02000	B0016	Brown, Tan Fibrous Homogeneous	9002, Issue 2 <sup>1</sup>	9/16/2004	9/17/2004	ND	NA _
BR-03000	B0021	Brown, Tan Fibrous Homogeneous	9002, Issue 2 <sup>1</sup>	9/20/2004	9/20/2004	ND	NA
BR-04000	B0021	Brown, Tan Fibrous Homogeneous	9002, Issue 2 <sup>1</sup>	9/20/2004	9/20/2004	ND	NA
BR-05000	B0022	Brown, Tan Fibrous Homogeneous	9002, Issue 2 <sup>1</sup>	9/21/2004	9/22/2004	ND	NA
BR-06000	B0022	Brown, Tan Fibrous Homogeneous	9002, Issue 2 <sup>1</sup>	9/21/2004	9/22/2004	ND	NA
BR-07000	B0023	Brown, Tan Fibrous Homogeneous	9002, Issue 2 <sup>t</sup>	9/21/2004	9/22/2004	ND	NA
BR-08000	B0023	Brown, Tan Fibrous Homogeneous	9002, Issue 2 <sup>t</sup>	9/21/2004	9/22/2004	ND	NA
BR-09000	B0026	Brown, Tan Fibrous Homogeneous	9002, Issue 2 <sup>1</sup>	9/22/2004	9/24/2004	ND	NA _
BR-10000	B0026	Brown, Tan Fibrous Homogeneous	9002, Issue 2 <sup>1</sup>	9/22/2004	9/24/2004	ND	NA
BR-11000	B0027	Brown, Tan Fibrous Homogeneous	9002, Issue 2 <sup>1</sup>	9/22/2004	9/24/2004	ND	NA
BR-12000	B0027	Brown, Tan Fibrous Homogeneous	9002, Issue 2 <sup>1</sup>	9/22/2004	9/24/2004	ND	NA
BR-13000	B0028	Brown, Tan Fibrous Homogeneous	9002, Issue 2 <sup>1</sup>	9/23/2004	9/26/2004	ND	NA
BR-14000	B0028	Brown, Tan Fibrous Homogeneous	9002, Issue 2 <sup>1</sup>	9/24/2004	9/26/2004	ND	NA
BR-15000	B0029	Brown, Tan Fibrous Homogeneous	9002, Issue 21	9/24/2004	9/26/2004	ND	NA
BR-16000	B0029	Brown, Tan Fibrous Homogeneous	9002, Issue 2 <sup>1</sup>	9/24/2004	9/26/2004	ND	NA
BR-17000	B0049	Tan Fibrous Homogeneous	9002, Issue 2 <sup>1</sup>	9/28/2004	9/30/2004	<1%	Tremolite/Actinolite
BR-17001	B0049	Beige Fibrous Homogeneous	9002, Issue 2 <sup>1</sup>	9/28/2004	10/2/2004	ND	NA
BR-17002	B0049	Brown Fibrous Homogeneous	9002, Issue 2 <sup>1</sup>	9/28/2004	10/2/2004	<1%	Tremolite/Actinolite
BX-17002	B0060	Brown Fibrous Homogeneous	9002, Issue 2 <sup>1</sup>	10/4/2004	10/5/2004	ND	NA
BR-17003	B0049	Beige Fibrous Homogeneous	9002, Issue 2 <sup>1</sup>	9/28/2004	10/2/2004	ND	NA
BR-17004	B0049	Beige Fibrous Homogeneous	9002, Issue 2 <sup>1</sup>	9/28/2004	10/2/2004	ND	NA
BR-18000	B0049	Brown, Tan Fibrous Homogeneous	9002, Issue 2 <sup>1</sup>	9/28/2004	9/30/2004	<1%	Tremolite/Actinolite
BX-18000	B0103	Tan Fibrous Homogeneous	9002, Issue 2 <sup>1</sup>	10/19/2004	10/20/2004	ND	NA _
BR-18001	B0049	Beige Fibrous Homogeneous	9002, Issue 2 <sup>1</sup>	9/28/2004	10/2/2004	ND	NA
BR-18002	B0049	Gray Fibrous Homogeneous	9002, Issue 2 <sup>1</sup>	9/28/2004	10/2/2004	ND	NA _
BR-18003	B0049	Beige Fibrous Homogeneous	9002, Issue 2 <sup>1</sup>	9/28/2004	10/2/2004	ND	NA
BR-18004	B0049	Beige Fibrous Homogeneous	9002, Issue 2 <sup>1</sup>	9/28/2004	10/2/2004	ND	NA

Table D-2
Clearance Soil Samples
BNSF Libby Railyard Response Action 2004

Sample ID	COC Number	Appearance	Analytical Method	Date Collected	Date Analyzed	Asbestos Percentage	Asbestos Type
BR-19000	B0050	Brown Fibrous Homogeneous	9002, Issue 2 <sup>1</sup>	9/28/2004	9/30/2004	ND	NA NA
BR-20000	B0050	Brown Fibrous Homogeneous	9002, Issue 2 <sup>t</sup>	9/28/2004	9/30/2004	ND	NA NA
BR-21000	B0051	Brown Fibrous Homogeneous	9002, Issue 2 <sup>1</sup>	9/28/2004	9/30/2004	ND	NA
BR-22000	B0051	Brown Fibrous Homogeneous	9002, Issue 2 <sup>1</sup>	9/28/2004	9/30/2004	ND	NA
BR-23000	B0061	Brown, Black Fibrous Homogeneous	9002, Issue 2 <sup>1</sup>	10/5/2004	10/6/2004	ND	NA
BR-24000	B0061	Brown, Black Fibrous Homogeneous	9002, Issue 2 <sup>1</sup>	10/5/2004	10/6/2004	ND	NA
BR-25000	B0062	Brown, Black Fibrous Homogeneous	9002, Issue 2 <sup>t</sup>	10/5/2004	10/6/2004	ND	NA
BR-26000	B0062	Brown, Black Fibrous Homogeneous	9002, Issue 2 <sup>1</sup>	10/6/2004	10/6/2004	ND	NA
BR-27000	B0063	Brown, Black Fibrous Homogeneous	9002, Issue 2 <sup>1</sup>	10/5/2004	10/6/2004	ND	NA
BR-28000	B0078	Brown Fibrous Homogeneous	9002, Issue 2 <sup>t</sup>	10/6/2004	10/7/2004	ND	NA
BR-29000	B0078	Brown Fibrous Homogeneous	9002, Issue 2 <sup>1</sup>	10/6/2004	10/7/2004	<1%	Tremolite/Actinolite
BR-29001	B0078	Brown Fibrous Homogeneous	9002, Issue 2 <sup>1</sup>	10/6/2004	10/11/2004	<1%	Tremolite/Actinolite
BX-29001	B0103	Tan Fibrous Homogeneous	9002, Issue 2 <sup>1</sup>	10/19/2004	10/20/2004	ND	NA
BR-29002	B0078	Brown Fibrous Homogeneous	9002, Issue 2 <sup>1</sup>	10/6/2004	10/11/2004	ND	NA
BR-29003	B0078	Brown Fibrous Homogeneous	9002, Issue 2 <sup>1</sup>	10/6/2004	10/11/2004	ND	NA NA
BR-29004	B0078	Brown Fibrous Homogeneous	9002, Issue 2 <sup>1</sup>	10/6/2004	10/11/2004	ND	NA
BR-30000	B0078	Brown Fibrous Homogeneous	9002, Issue 2 <sup>1</sup>	10/6/2004	10/7/2004	<1%	Tremolite/Actinolite
BR-30001	B0079	Brown Fibrous Homogeneous	9002, Issue 2 <sup>1</sup>	10/6/2004	10/11/2004	<1%	Tremolite/Actinolite
BR-30002	B0079	Brown Fibrous Homogeneous	9002, Issue 2 <sup>1</sup>	10/6/2004	10/11/2004	<1%	Tremolite/Actinolite
BR-30003	B0079	Brown Fibrous Homogeneous	9002, Issue 2 <sup>1</sup>	10/6/2004	10/11/2004	<1%	Tremolite/Actinolite
BR-30004	B0079	Brown Fibrous Homogeneous	9002, Issue 2 <sup>t</sup>	10/6/2004	10/11/2004	<1%	Tremolite/Actinolite
BR-30005	B0079	Brown Fibrous Homogeneous	9002, Issue 2 <sup>1</sup>	10/6/2004	10/11/2004	<1%	Tremolite/Actinolite
BX-30000	B0103	Tan Fibrous Homogeneous	9002, Issue 2 <sup>1</sup>	10/19/2004	10/20/2004	ND	NA
BR-31000	B0080	Brown Fibrous Homogeneous	9002, Issue 2 <sup>t</sup>	10/11/2004	10/12/2004	ND	NA
BR-32000	B0080	Brown Fibrous Homogeneous	9002, Issue 2 <sup>1</sup>	10/11/2004	10/12/2004	<1%	Tremolite/Actinolite
BX-32000	B0109	Tan Fibrous Homogeneous	9002, Issue 2 <sup>1</sup>	10/20/2004	10/21/2004	NĎ	NA
BR-33000	B0081	Brown Fibrous Homogeneous	9002, Issue 2 <sup>1</sup>	10/11/2004	10/12/2004	ND	NA
BR-34000	B0081	Brown Fibrous Homogeneous	9002, Issue 2 <sup>1</sup>	10/11/2004	10/12/2004	ND	NA

Table D-2
Clearance Sail Samples
BNSF Libby Railyard Response Action 2004

Sample ID	COC Number	Appearance	Analytical Method	Date Collected	Date Analyzed	Asbestos Percentage	Asbestos Type
BR-35000	B0082	Beige Fibrous Homogeneous	9002, Issue 2 <sup>1</sup>	10/11/2004	10/12/2004	ND	NA
BR-36000	B0082	Beige Fibrous Homogeneous	9002, Issue 2 <sup>1</sup>	10/11/2004	10/12/2004	ND	NA
BR-37000	B0083	Brown Fibrous Homogeneous	9002, Issue 2 <sup>1</sup>	10/13/2004	10/13/2004	ND	NA
BR-38000	B0083	Brown Fibrous Homogeneous	9002, Issue 2 <sup>1</sup>	10/13/2004	10/13/2004	ND	ND
BR-39000	B0084	Brown Fibrous Homogeneous	9002, Issue 2 <sup>1</sup>	10/13/2004	10/13/2004	ND	NA
BR-40000	B0084	Brown Fibrous Homogeneous	9002, Issue 21	10/13/2004	10/13/2004	ND	NA
BR-41000	B0085	Brown Fibrous Homogeneous	9002, Issue 2 <sup>1</sup>	10/13/2004	10/13/2004	<1%	Tremolite/Actinolite
BX-41000	B0098	Brown Fibrous Homogeneous	9002, Issue 2 <sup>1</sup>	10/15/2004	10/15/2004	<1%	Tremolite/Actinolite
BY-41000	B0108	Tan Fibrous Homogeneous	9002, Issue 2 <sup>1</sup>	10/19/2004	10/20/2004	ND	NA NA
BR-42000	B0086	Brown Fibrous Homogeneous	9002, Issue 2 <sup>1</sup>	10/14/2004	10/14/2004	ND	NA
BR-43000	B0086	Brown Fibrous Homogeneous	9002, Issue 2 <sup>1</sup>	10/14/2004	10/14/2004	ND	NA
BR-44000	B0087	Brown Fibrous Homogeneous	9002, Issue 2 <sup>1</sup>	10/14/2004	10/14/2004	ND	NA NA
BR-45000	B0088	Tan Fibrous Homogeneous	9002, Issue 2	10/15/2004	10/15/2004	ND	NA
BR-46000	B0088	Tan Fibrous Homogeneous	9002, Issue 2 <sup>1</sup>	10/15/2004	10/15/2004	ND	NA
BR-47000	B0098	Brown Fibrous Homogeneous	9002, Issue 2 <sup>t</sup>	10/15/2004	10/15/2004	ND	NA
BR-48000 <sup>2</sup>	B0109	Tan Fibrous Homogeneous	9002, Issue 2 <sup>1</sup>	10/20/2004	10/21/2004	ND	NA

<sup>&</sup>lt;sup>1</sup> NIOSH Method 9002, Issue 2

ND- Not detected

NA- Not applicable

<sup>&</sup>lt;sup>2</sup> Sample BR-48000 was reported by the laboratory to be BX-48000. EMR has notified the labororatory of the error and requested a revised report.

Table D-3
TEM Air Monitoring Samples
BNSF Libby Railyard Response Action 2004

	Analytical (	Sample Collection	Sample Analysis			Structures	Structure	Volume		
Sample ID	Method	Date	Date	COC Number	Asbestos Type	≥9.5 μ<5	s ≥0.5 μ	(Liters)	S/mm <sup>2</sup>	S/ce
BN-00135	TEM	9/3/2004	9/7/2004	B0001	NA	ND	ND	1560	<19.00	<0.0047
BN-00136	TEM	9/3/2004	9/7/2004	B0001	NA	ND	ND	1537	<19.00	< 0.0048
BN-00137	TEM	9/3/2004	9/7/2004	B0001	NA	ND	ND	1486	<15.00	<0.0040
BN-00138	TEM	9/3/2004	9/7/2004	B0001	. NA	ND	ND	1541	<19.00	<0.0048
BN-00139	TEM	9/3/2004	9/7/2004	B0001	NA	ND	ND	1338	<15.00	<0.0044
BN-00140	TEM	9/3/2004	9/7/2004	B0001	NA	ND	ND	1650	<19.00	< 0.0045
BN-00101	TEM	9/3/2004	9/7/2004	B0001	NA	ND	ND	730	<8.50	< 0.0045
BN-00093	TEM	9/2/2004	9/7/2004	B0002	NA	ND	ND	672	<8.50	< 0.0049
BN-00092	TEM	9/2/2004	9/7/2004	B0002	NA	ND	ND	526	<7.70	<0.0056
BN-00091	TEM	9/2/2004	9/7/2004	B0002	NA	ND	ND	590	<7.70	< 0.0050
BN-00090	TEM	9/2/2004	9/7/2004	B0002	NA	ND	ND	1246	<15.00	<0.0048
BN-00089	TEM	9/2/2004	9/7/2004	B0002	NA	ND	ND	476	<7.70	<0.0062
BN-00083	TEM	9/1/2004	9/8/2004	B0003	NA	ND	ND	1011	<13.00	< 0.0049
BN-00084	TEM	9/1/2004	9/8/2004	B0003	NA	ND	ND	1536	<19.00	<0.0048
BN-00085	TEM	9/1/2004	9/8/2004	B0003	NA	ND	ND	957	<11.00	<0.0044
BN-00086	TEM	9/1/2004	9/8/2004	B0003	NA	ND	ND	1018	<13.00	<0.0048
BN-00087	TEM	9/1/2004	9/8/2004	B0003	NA	ND	ND	1526	<15.00	< 0.0039
BN-00142	TEM	9/7/2004	9/8/2004	B0004	NA	ND	ND	2227	<19.00	<0.0033
BN-00143	TEM	9/7/2004	9/8/2004	B0004	NA	ND	ND	2254	<19.00	<0.0033
BN-00144	TEM	9/7/2004	9/8/2004	B0004	NA	ND	ND	2507	<19.00	<0.0030
BN-00145	TEM	9/7/2004	9/8/2004	B0004	NA	ND	ND	2185	<19.00	<0.0034
BN-00146	TEM	9/7/2004	9/8/2004	B0004	NA	ND	ND	2606	<19.00	<0.0028
BN-00147	TEM	9/7/2004	9/8/2004	B0004	NA	ND _	ND	2223	<19.00	<0.0033
BN-00154	TEM	9/8/2004	9/9/2004	B0005	NΑ	ND	ND	2079	<19.00	<0.0036
BN-00155	TEM	9/8/2004	9/9/2004	B0005	NA	ND	ND	2212	<19.00	< 0.0033
BN-00156	TEM	9/8/2004	9/9/2004	B0005	NA	ND	ND	2109	<19.00	<0.0035
BN-00157	_ TEM	9/8/2004	9/9/2004	B0005	NA	ND	ND	2088	<19.00	<0.0035
BN-00158	TEM	9/8/2004	9/9/2004	B0005	NA	ND	ND	1965	<19.00	<0.0038
BN-00159	ТЕМ	9/8/2004	9/9/2004	B0005	NA	ND	ND	1902	<19.00	<0.0039
BN-00160	TEM	9/9/2004	9/11/2004	B0008	NA	ND	ND	2238	<19.00	<0.0033
BN-00161	TEM	9/9/2004	9/11/2004	B0008	NA	ND	ND	2200	<19.00	<0.0034
BN-00162	TEM	9/9/2004	9/11/2004	B0008	NA	ND	ND	2234	<19.00	<0.0033
BN-00163	TEM	9/9/2004	9/11/2004	B0008	NA	ND	ND	2146	<19.00	<0.0035
BN-00164	TEM	9/9/2004	9/11/2004	B0008	NA	ND	ND	2382	<19.00	<0.0031
BN-00165	TEM	9/9/2004	9/11/2004	B0008	NA	ND	ND	2196	<19.00	<0.0034
BN-00166	TEM	9/9/2004	9/11/2004	B0008	NA	ND	ND	2236	<19.00	<0.0033
BN-00173	TEM	9/10/2004	9/11/2004	B0009	NA	ND	ND	2101	<19.00	<0.0035

Libby December 2004

Table D-3
TEM Air Monitoring Samples
BNSF Libby Railyard Response Action 2004

	Analytical	Sample Collection	Sample Analysis			Structures	Structure	Volume	=	<del></del>
Sample ID	Method	Date	Date	COC Number	Asbestos Type	≥0.5 μ<5	s ≥0.5 μ	(Liters)	S/mm <sup>2</sup>	S/cc
BN-00174	TEM	9/10/2004	9/11/2004	B0009	NA	ND	ND	2077	<19.00	<0.0036
BN-00175	TEM	9/10/2004	9/11/2004	B0009	NA	ND	ND	2100	<19.00	<0.0035
BN-00176	TEM	9/10/2004	9/11/2004	B0009	NA	ND	ND	1943	<19.00	<0.0038
BN-00177	TEM	9/10/2004	9/11/2004	B0009	NA	ND	ND	1995	<19.00	< 0.0037
BN-00178	TEM	9/10/2004	9/11/2004	B0009	NA	ND	ND	1934	<19.00	<0.0038
BN-00179	TEM	9/10/2004	9/11/2004	B0009	NA	ND	ИD	2008	<19.00	< 0.0037
BN-00180	TEM	9/10/2004	9/11/2004	B0009	NA	ND	ND	819	<9.60	< 0.0045
BN-00181	TEM	9/11/2004	9/12/2004	B0010	NA	ND	ND	1894	<19.00	< 0.0039
BN-00182	TEM	9/11/2004	9/12/2004	B0010	NA	ND	ND	2253	<19.00	< 0.0033
BN-00183	TEM	9/11/2004	9/12/2004	B0010	NA	ND	ND	1858	<19.00	< 0.0040
BN-0184	TEM	9/11/2004	9/12/2004	B0010	NA	ND	ND	1546	<19.00	< 0.0036
BN-00185	TEM	9/11/2004	9/12/2004	B0010	NA	ND	ND	1190	<13.00	< 0.0041
BN-00186	TEM	9/11/2004	9/12/2004	B0010	NA	ND	ND	1794	<19.00	< 0.0041
BN-00187	TEM	9/11/2004	9/12/2004	B0010	NA	ND	ND	1045	<13.00	<0.0047
BN-00188	TEM	9/11/2004	9/12/2004	B0010	NA	ND	ND	1919	<19.00	<0.0039
BN-00170	TEM	9/10/2004	9/14/2004	B0011	NA	ND	ND	1230	<15.00	<0.0048
BN-00194	TEM	9/12/2004	9/14/2004	B0011	NA	ND	ND	1112	<13.00	< 0.0044
BN-00195	TEM	9/12/2004	9/14/2004	B0011	NA	ND	ND	1159	<13.00	< 0.0043
BN-00196	TEM	9/12/2004	9/14/2004	B0011	NA	ND	ND	1087	<13.00	< 0.0045
BN-00197	TEM	9/12/2004	9/14/2004	B0011	NA	ND	ND	1091	<13.00	< 0.0045
BN-00198	TEM	9/12/2004	9/14/2004	B0011	NA	. ND	ND	1223	<15.00	<0.0048
BN-00199	TEM	9/12/2004	9/14/2004	B0011	NA	ND	ND	772	<9.60	<0.0048
BN-00200	TEM	9/13/2004	9/14/2004	B0012	NA	ND	ND	1969	<19.00	< 0.0038
BN-00201	TEM	9/13/2004	9/14/2004	B0012	NA	ND	ND	2285	<19.00	< 0.0032
BN-00202	TEM	9/13/2004	9/14/2004	B0012	NA	ND	ND	1364	<15.00	< 0.0043
BN-00203	TEM	9/13/2004	9/14/2004	B0012	NA NA	_ ND	ND	2244	<19.00	< 0.0033
BN-00204	TEM	9/13/2004	9/14/2004	B0012	NA_	ND	ND	1976	<19.00	< 0.0037
BN-00205	TEM	9/13/2004	9/14/2004	B0012	NA	ND	ND	2022	<19.00	< 0.0037
BN-00206	TEM	9/13/2004	9/14/2004	B0012	NA	ND	ND	1999	<19.00	<0.0037
BN-00213	TEM	9/14/2004	9/15/2004	B0014	NA	ND	ND	1907	<19.00	<0.0039
BN-00214	TEM	9/14/2004	9/15/2004	B0014	NA_	ND_	ND	828	<9.60	<0.0045
BN-00215	TEM	9/14/2004	9/15/2004	B0014	NA	ND	ND	2210	<19.00	<0.0034
BN-00216	TEM	9/14/2004	9/15/2004	B0014	NA	ND	ND	1938	<19.00	<0.0038
BN-00217	TEM	9/14/2004	9/15/2004	B0014	NA	ND	ND	913	<11.00	<0.0046
BN-00218	TEM	9/14/2004	9/15/2004	B0014	NA	ND	ND	1881	<19.00	<0.0039
BN-00219	TEM	9/15/2004	9/16/2004	B0017	NA	ND	ND	1659	<19.00	<0.0045
BN-00220	TEM	9/15/2004	9/16/2004	B0017	NA_	ND	ND	2399	<19.00	<0.0031

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Table D-3
TEM Air Monitoring Samples
BNSF Libby Railyard Response Action 2004

	Analytical	Sample Collection	Sample Analysis			Structures	Structure	Volume	<del></del>	<del></del>
Sample ID	Method	Date	Date	COC Number	Asbestos Type	≥9.5 μ<5	s ≥8.5 μ	(Liters)	S/mm²	S/cc_
BN-00221	TEM	9/15/2004	9/16/2004	B0017	NA	ND	ND	2162	<19.00	<0.0034
BN-00222	TEM	9/15/2004	9/16/2004	B0017	NA	ND	ND	1272	<15.00	<0.0047
BN-00223	TEM	9/15/2004	9/16/2004	B0017	NA	ND	ND	2054	<19.00	< 0.0036
BN-00224	TEM	9/15/2004	9/16/2004	B0017	NA	ND	ND	1843	<19.00	< 0.0040
BN-00225	TEM	9/15/2004	9/16/2004	B0017	NA	ND	ND	900	<11.00	< 0.0047
BN-00231	TEM	9/16/2004	9/17/2004	B0018	NA	ND	ND	1280	<15.00	< 0.0046
BN-00232	TEM	9/16/2004	9/17/2004	B0018	NA	ND	ND	1529	<15.00	< 0.0040
BN-00233	TEM	9/16/2004	9/17/2004	B0018	NA	ND	ND	2033	<19.00	< 0.0036
BN-00234	TEM	9/16/2004	9/17/2004	B0018	NA	ND	ND	1221	<15.00	< 0.0049
BN-00235	TEM	9/16/2004	9/17/2004	B0018	NA	ND	ND	1980	<19.00	< 0.0037
BN-00236	TEM	9/16/2004	9/17/2004	B0018	NA	ND	ND	2083	<19.00	<0.0036
BN-00237	TEM	9/16/2004	9/17/2004	B0018	NA	ND	ND	2008	<19.00	< 0.0037
BN-00238	TEM	9/16/2004	9/17/2004	B0018	NA	ND	ND	864	<11,00	< 0.0049
BN-00239	TEM	9/17/2004	9/19/2004	B0019	NA	ND	ND	1378	<15.00	< 0.0043
BN-00240	TEM	9/17/2004	9/19/2004	B0019	NA	ND	ND	2387	<19.00	< 0.0031
BN-00241	TEM	9/17/2004	9/19/2004	B0019	NA	ND	ND	1349	<15.00	< 0.0044
BN-00242	TEM	9/17/2004	9/19/2004	B0019	NA	ND	ND	1323	<15.00	< 0.0045
BN-00243	TEM	9/17/2004	9/19/2004	B0019	NA	ND	ND	2014	<19.00	< 0.0037
BN-00244	TEM	9/17/2004	9/19/2004	B0019	NA	ND	ND	1961	<19.00	<0.0038
BN-00245	TEM	9/17/2004	9/19/2004	B0019	NA	ND	ND	1290	<15.00	<0.0046
BN-00250	TEM	9/18/2004	9/20/2004	B0020	NA	ND	ND	1261	<15.00	< 0.0047
BN-00251	TEM	9/18/2004	9/20/2004	B0020	NA	ND	ND	1052	<13.00	<0.0047
BN-00252	TEM	9/18/2004	9/20/2004	B0020	NA _	ND	ND_	1790	<19.00	<0.0041
BN-00253	TEM	9/18/2004	9/20/2004	B0020	NA	ND	ND	1724	<19.00	< 0.0043
BN-00254	TEM	9/18/2004	9/20/2004	B0020	NA	ND	ND	1301	<15.00	<0.0046
BN-00255	TEM	9/18/2004	9/20/2004	B0020	NA	ND	ND	915	<11.00	<0.0046
BN-00257	TEM	9/20/2004	9/22/2004	B0024	NA	ND	ND	1526	<19.00	<0.0049
BN-00258	ТЕМ	9/20/2004	9/22/2004	B0024	NA	ND	ND	1511	<19.00	<0.0049
BN-00259	TEM	9/20/2004	9/22/2004	B0024	NA	ND	ND	2020	<19.00	<0.0037
BN-00260	TEM	9/20/2004	9/22/2004	B0024	NA	ND	ND	1151	<13.00	< 0.0043
BN-00261	TEM	9/20/2004	9/22/2004	B0024	NA	ND	ND	1984	<19.00	<0.0037
BN-00262	TEM	9/20/2004	9/22/2004	B0024	NA	ND	ND	1094	<13.00	<0.0045
BN-00264	TEM	9/20/2004	9/22/2004	B0024	NA	ND	ND	1405	<15.00	<0.0042
BN-00266	TEM	9/21/2004	9/23/2004	B0025	NA	ND	ND	1495	<15.00	< 0.0040
BN-00267	TEM	9/21/2004	9/23/2004	B0025	NA	ND	ND	1196	<15.00	<0.0050
BN-00268	TEM	9/21/2004	9/23/2004	B0025	NA	ND	ND	848	<9.60	<0.0044_
BN-00269	TEM	9/21/2004	9/23/2004	B0025	NA	ND	ND	1186	<13.00	<0.0042

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TEM Air Monitoring Samples
BNSF Libby Railyard Response Action 2004

	Analytical :	Sample Collection	Sample Analysis			Structures	- Structure	Volume		
Sample ID	Method	Date.	Date	COCNumber	Asbestos Type	≥9.5 μ<5	s ≥9.5 μ	(Liters)	S/mm²	S/cc
BN-00270	TEM	9/21/2004	9/23/2004	B0025	NA	ND	ND	1665	<19.00	<0.0044
BN-00271	TEM	9/21/2004	9/23/2004	B0025	NA	ND	ND	2057	<19.00	< 0.0036
BN-00272	TEM	9/21/2004	9/23/2004	B0025	NA	ND	ND	1240	<15.00	<0.0048
BN-00275	TEM	9/21/2004	10/11/2004	B0076	overloaded	ND	ND	NA	NA	NA
BN-00275	TEM	9/21/2004	10/12/2004	B0076	NA	ND	ND	1358	<51.75	<0.0147
BN-00278	TEM	9/22/2004	10/11/2004	B0076	NA	ND	ND	1385	<15.00	< 0.0043
BN-00279	TEM	9/22/2004	9/24/2004	B0031	NA	ND	ND	1375	<15.00	<0.0043
BN-00280	TEM	9/22/2004	9/24/2004	B0031	NA	ND	ND	1318	<15.00	<0.0045
BN-00281	TEM	9/22/2004	9/24/2004	B0031	NA	ND	ND	1202	<15.00	<0.0049
BN-00282	TEM	9/22/2004	9/24/2004	B0031	NA	ND	ND	1229	<15.00	<0.0048
BN-00283	TEM	9/22/2004	9/24/2004	B0031	NA	ND	ND	1902	<19.00	<0.0039
BN-00284	TEM	9/23/2004	9/24/2004	B0033	NA	ND	ND	1471	<15.00	<0.0040
BN-00285	TEM	9/23/2004	9/24/2004	B0033	NA	ND	ND	1403	<15.00	<0.0042
BN-00286	TEM	9/23/2004	9/24/2004	B0033	NA	ND	ND	1229	<15.00	<0.0048
BN-00287	TEM	9/23/2004	9/24/2004	B0033	NA	ND	ND	1138	<13.00	<0.0043
BN-00288	TEM	9/23/2004	9/24/2004	B0033	NA	ND	ND	1021	<13.00	<0.0048
BN-00293	TEM	9/24/2004	9/28/2004	B0032	L. Amphibole	ND	1	1118	13.00	0.0044
BN-00294	TEM	9/24/2004	9/28/2004	B0032	NA	ND	ND	1277	<15.00	<0.0046
BN-00295	TEM	9/24/2004	9/28/2004	B0032	NA	ND	ND	2290	<19.00	<0.0032
BN-00296	TEM	9/24/2004	9/28/2004	B0032	L. Amphibole	ND	1	1408	15.00	0.0042
BN-00297	TEM	9/24/2004	9/28/2004	B0032	NA	ND	ND	1730	<19.00	<0.0043
BN-00298	TEM	9/24/2004	9/28/2004	B0032	L. Amphibole	2	1	1193	38.00	0.0120
BN-00299	TEM	9/24/2004	9/28/2004	B0032	NA	ND	ND	1990	<19.00	<0.0037
BN-00300	TEM	9/25/2004	9/28/2004	B0046	NA	ND	ND	1158	<13.00	<0.0043
BN-00301	TEM	9/25/2004	9/28/2004	B0046	L. Amphibole	ND	2	1148	26.00	0.0086
BN-00303	TEM	9/25/2004	9/28/2004	B0046	NA	ND	ND	1544	<19.00	<0.0048
BN-00303	TEM	9/25/2004	9/28/2004	B0046	NA	ND	ND	1717	<19.00	<0.0043
BN-00304	TEM	9/25/2004	9/28/2004	B0046	NA	ND	ND	1164	<13.00	<0.0042
BN-00305	TEM	9/25/2004	9/28/2004	B0046	NA	ND	ND	1178	<13.00	<0.0042
BN-00306	TEM	9/25/2004	9/28/2004	B0046	NA	ND	ND	2431	<19.00	<0.0030
BN-00307	<u> </u>	9/25/2004	9/28/2004	B0046	NA	ND	ND	2110	<19.00	<0.0035
BN-00308	TEM	9/27/2004	9/28/2004	B0045	NA	ND	ND	1539	<19.00	<0.0048
BN-00310	TEM	9/27/2004	9/28/2004	B0045	NA	ND	ND	1453	<15.00	<0.0041
BN-00311	TEM	9/27/2004	9/28/2004	B0045	NA	ND	ND	1791	<19.00	<0.0041
BN-00312	TEM	9/27/2004	9/28/2004	B0045	NA	ND	ND	1655	<19.00	<0.0045
BN-00313	TEM	9/27/2004	9/28/2004	B0045	NA	ND	ND	2124	<19.00	<0.0036
BN-00314	TEM	9/27/2004	9/28/2004	B0045	NA	ND	ND	2200	<19.00	<0.0034

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TEM Air Monitoring Samples
BNSF Libby Railyard Response Action 2004

		Sample Collection		and the second		Structures	Structure	Volume		
Sample ID	Method	Date Date	Date	COC Number	Asbestos Type	≥9.5 µ<5	s ≥0.5 μ	(Liters)	S/mm²	S/cc
BN-00315	TEM	9/27/2004	9/28/2004	B0045	NA	ND	ND	2813	<19.00	<0.0026
BN-00316	TEM	9/28/2004	9/30/2004	B0047	NA	ND	ND	1840	<19.00	< 0.0040
BN-00318	TEM	9/28/2004	9/30/2004	B0047	L. Amphibole	ND	1	1641	19.00	0.0045
BN-00319	TEM	9/28/2004	9/30/2004	B0047	NA	ND	ND	1478	<15.00	< 0.0040
BN-00320	TEM	9/28/2004	9/30/2004	B0047	NA	ND	ND	3660	<19.00	< 0.0020
BN-00321	TEM	9/28/2004	9/30/2004	B0047	NA NA	ND	ND	2288	<19.00	< 0.0032
BN-00322	TEM	9/28/2004	9/30/2004	B0047	NA	ND	ND	4283	<19.00	< 0.0017
BN-00323	TEM	9/28/2004	9/30/2004	B0047	NA	ND	ND	1534	<19.00	<0.0048
BN-00327	TEM	9/29/2004	9/30/2004	B0052	NA	ND	ND	1598	<19.00	<0.0046
BN-00328	TEM	9/29/2004	9/30/2004	B0052	NA	ND	ND	1163	<13.00	<0.0042
BN-00329	TEM	9/29/2004	9/30/2004	B0052	NA	ND	ND	2411	<19.00	< 0.0031
BN-00330	TEM	9/29/2004	9/30/2004	B0052	NA	ND	ND	3969	<19.00	<0.0019
BN-00331	TEM	9/29/2004	9/30/2004	B0052	NA	ND	ND	3983	<19.00	<0.0019
BN-00335	TEM	9/30/2004	10/1/2004	B0054	NA	ND	ND	1373	<15.00	< 0.0043
BN-00336	TEM	9/30/2004	10/1/2004	B0054	NA	ND	ND	4275	<19.00	<0.0017
BN-00337	TEM	9/30/2004	10/1/2004	B0054	NA	ND	ND	1404	<15.00	<0.0042
BN-00338	TEM	9/30/2004	10/1/2004	B0054	NA	ND	ND	1998	<19.00	<0.0037
BN-00339	TEM	9/30/2004	10/1/2004	B0054	NA	ND	ND	3801	<19.00	<0.0019
BN-00340	TEM	10/1/2004	10/6/2004	B0035	NA	ND	ND	1518	<19.00	<0.0049
BN-00343	TEM	10/1/2004	10/5/2004	B0056	NA	ND	ND	1635	<19.00	< 0.0045
BN-00344	TEM	10/1/2004	10/5/2004	B0056	NA	ND	ND	1438	<15.00	< 0.0041
BN-00345	TEM	10/1/2004	10/5/2004	B0056	NA	ND	ND	3276	<19.00	<0.0023
BN-00346	TEM	10/1/2004	10/5/2004	B0056	NA	ND	ND	1667	<19.00	<0.0044
BN-00347	TEM	10/1/2004	10/5/2004	B0056	L. Amphibole	ND	1	3600	19.00	0.0021
BN-00350	TEM	10/2/2004	10/5/2004	B0058	NA	ND	ND	1680	<19.00	< 0.0044
BN-00351	TEM	10/2/2004	10/5/2004	B0058	NA	ND	ND	1308	<15.00	<0.0045
BN-00352	TEM	10/2/2004	10/5/2004	B0058	NA	ND	ND	2600	<19.00	<0.0028
BN-00353	TEM	10/2/2004	10/5/2004	B0058	NA	ND	ND	3885	<19.00	< 0.0019
BN-00354	TEM	10/2/2004	10/5/2004	B0058	NA	ND	ND	1803	<19.00	<0.0041
BN-00355	TEM	10/4/2004	10/5/2004	B0043	NA	ND	ND	2157	<19.00	< 0.0034
BN-00356	TEM	10/4/2004	10/5/2004	B0043	NA	ND	ND	1346	<15.00	<0.0044
BN-00357	TEM	10/4/2004	10/5/2004	B0043	NA	ND	ND	1144	<13.00	<0.0043
BN-00358	TEM	10/4/2004	10/5/2004	B0043	NA	ND	ND	1272	<15.00	<0.0047
BN-00359	TEM	10/4/2004	10/5/2004	B0043	NA	ND	ND	1639	<19.00	<0.0045
BN-00360	TEM	10/4/2004	10/5/2004	B0043	NA	ND	ND	1581	<19.00	<0.0047
BN-00361	TEM	10/4/2004	10/5/2004	B0043	NA	ND	ND	1573	<19.00	< 0.0047
BN-00362	TEM	10/4/2004	10/6/2004	B0035	NA	ND	ND	1361	<15.00	<0.0044

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TEM Air Monitoring Samples
BNSF Libby Railyard Response Action 2004

		Sample Collection			<u> </u>	Structures	Structure	Volume		
Sample ID	Method	Date	Date	COC Number	Asbestos Type	≥9.5 µ<5	s 249.5 µ	(Liters)	S/mm <sup>2</sup>	S/ec
BN-00367	TEM	10/5/2004	10/6/2004	B0035	NA	ND	_ ND	1300	<15.00	<0.0046
BN-00369	TEM	10/5/2004	10/6/2004	B0035	NA	ND	ND	1172	<13.00	< 0.0042
BN-00370	TEM	10/5/2004	10/6/2004	B0035	L. Amphibole	ND	1	1971	19	0.0038
BN-00371	TEM	10/5/2004	10/6/2004	B0035	NA	ND	ND	1835	<19.00	<0.0040
BN-00372	TEM	10/5/2004	10/6/2004	B0035	NA	ND	ND	1845	<19.00	<0.0040
BN-00373	TEM	10/5/2004	10/6/2004	B0035	NA	ND	ND	1808	<19.00	<0.0041
BN-00374	TEM	10/5/2004	10/6/2004	B0035	NA	ND	ND	1196	<13.00	<0.0041
BN-00376	TEM	10/6/2004	10/8/2004	B0067	NA	ND	ND	2097	<19.00	<0.0035
BN-00377	TEM	10/6/2004	10/8/2004	B0067	NA	ND	ND	2053	<19.00	<0.0036
BN-00378	TEM	10/6/2004	10/8/2004	B0067	NA	ND	ND	2058	<19.00	<0.0036
BN-00379	TEM _	10/6/2004	10/8/2004	B0067	Tremolite/Actinolite	ND	2	1957	38	0.0076
BN-00380	TEM _	10/6/2004	10/8/2004	B0067	NA	ND	ND	1242	<15.00	<0.0048
BN-00382	TEM	10/6/2004	10/8/2004	B0067	_ NA	ND	ND	1122	<13.00	<0.0044
BN-00388	TEM	10/7/2004	10/9/2004	B0074	NA	ND	ND	1396	<15.00	<0.0042
BN-00389	TEM	10/7/2004	10/9/2004	B0074	NA	ND	ND	1985	<19.00	< 0.0037
BN-00390	TEM	10/7/2004	10/9/2004	B0074	NA	ND	מא	1974	<19.00	<0.0037
BN-00391	TEM	10/7/2004	10/9/2004	B0074	NA	ND	ND	1967	<19.00	<0.0038
BN-00392	TEM	10/7/2004	10/9/2004	B0074	NA	ND	ND	1267	<15.00	<0.0047
BN-00393	TEM _	10/7/2004	10/9/2004	B0074	NA NA	ND	ND	1922	<19.00	<0.0039
BN-00394	TEM	10/7/2004	10/9/2004	B0074	NA NA	ND	_ ND	1166	<13.00	<0.0042
BN-00395	TEM	10/8/2004	10/11/2004	B0076	NA	ND	ND	1815	<19.00	<0.0041
BN-00396	TEM	10/8/2004	10/11/2004	B0076	NA	ND	ND	1841	<19.00	<0.0040
BN-00397	TEM	10/8/2004	10/11/2004	B0076	NA	ND	ND	1226	<15.00	<0.0048
BN-00398	ТЕМ	10/8/2004	10/11/2004	B0076	NA	ND	ND	1212	<15.00	< 0.0049
BN-00399	ТЕМ	10/8/2004	10/11/2004	B0076	L. Amphibole	1	ND	1873	19	0.0040
BN-00400	TEM	10/8/2004	10/11/2004	B0076	NA	ND	ND	1255	<15.00	<0.0047
BN-00401	TEM	10/8/2004	10/11/2004	B0076	NA	ND	ND	1008	<13.00	<0.0049
BN-00408	TEM _	10/11/2004	10/12/2004	B0089	NA	ND	ND	2041	<19.00	<0/0036
BN-00409	ТЕМ	10/11/2004	10/12/2004	B0089	NA_	ND	ND_	2023	<19.00	<0.0037
BN-00410	TEM	10/11/2004	10/12/2004	B0089	NA	ИD	ND	1265	<15.00	<0.0047
BN-00411	TEM	10/11/2004	10/12/2004	B0089	NA	ND	ND	2023	<19.00	<0.0037
BN-00412	ТЕМ	10/11/2004	10/12/2004	B0089	NA	ND	ND	2006	<19.00	<0.0037
BN-00414	TEM	10/11/2004	10/12/2004	B0089	NA	ND	ND	1198	<15.00	<0.0049
BN-00415	TEM	10/11/2004	10/12/2004	B0089	NA	ND	ND	1240	<15.00	<0.0048
BN-00417	ТЕМ	10/12/2004	10/13/2004	B0092	NA	ND	ND	1988	<19.00	<0.0037
BN-00418	TEM	10/12/2004	10/13/2004	B0092	NA	ND	ND	1964	<19.00	<0.0038
BN-00419	TEM	10/12/2004	10/13/2004	B0092	NA	ND	ND	1932	<19.00	<0.0038

Libby December 2004 Prepared By EMR, Inc. Project 5539.004

Table D-3 **TEM Air Monitoring Samples** 

# BNSF Libby Railyard Response Action 2004

	Analytical	Sample Collection	Sample Analysis	COON		Structures	Structure		s:2	
Sample ID				COC Number	Asbestos Type	≥0.5 µ<5	s ≥9.5 μ	(Liters)	S/mm²	S/cc_
BN-00420	TEM	10/12/2004	10/13/2004	B0092	NA	ND	ND	1228	<15.00	<0.0048
BN-00421	TEM_	10/12/2004	10/13/2004	B0092	NA	ND	ND_	1939	<19.00	<0.0038
BN-00422	TEM	10/12/2004	10/13/2004	B0092	NA	ND	ND	1911	<19.00	<0.0039
BN-00427	TEM	10/13/2004	10/14/2004	B0096	NA	ND	ND	1925	<19.00	<0.0038
BN-00428	TEM	10/13/2004	10/14/2004	B0096	NA	ND	ND	1929	<19.00	<0.0038
BN-00429	TEM	10/13/2004	10/14/2004	B0096	NA	ND	ND	1911	<19.00	<0.0039
BN-00430	TEM	10/13/2004	10/14/2004	B0096	NA NA	ND	ND	1901	<19.00	<0.0039
BN-00431	TEM	10/13/2004	10/14/2004	B0096	NA	ND	ND	1887	< <u>1</u> 9.00	<0.0039
BN-00432	TEM	10/13/2004	10/14/2004	B0096	NA	ND	ND	1333	<15.00	<0.0044
BN-00435	TEM	10/13/2004	10/14/2004	B0096	NA	ND	ND	1044	<13,00	<0.0047
BN-00437	TEM	10/14/2004	10/16/2004	B0097	NA	ND	ND	1957	<19.00	<0.0038
BN-00438	TEM	10/14/2004	10/16/2004	B0097	NA	ND	ND	1943	<19,00	<0.0038
BN-00439	TEM	10/14/2004	10/16/2004	B0097	NA	ND	ND	1887	<19.00	<0.0039
BN-00440	TEM	10/14/2004	10/16/2004	B0097	NA	ND	ND	1883	<19.00	<0.0039
BN-00441	TEM	10/14/2004	10/16/2004	B0097	NA	ND	ND	1855	<19.00	<0.0039
BN-00442	ТЕМ	10/14/2004	10/18/2004	B0099	NA	ND	ND	1161	<19.00	<.0049
BN-00445	TEM	10/15/2004	10/18/2004	B0099	NA	ND	ND	1505_	<15.00	<.0041
BN-00446	TEM	10/15/2004	10/18/2004	B0099	NA	ND	ND	1453	<15.00	<.0040
BN-00447	TEM	10/15/2004	10/18/2004	B0099	NA	ND	ND	1495	<15.00	<.0040
BN-00448	TEM	10/15/2004	10/18/2004	B0099	NA	ND	ND	1491	<15.00	<.0040
BN-00449	TEM	10/15/2004	10/18/2004	B0099	NA	ND	ND	1484	<11.00	<.0043
BN-00452	TEM	10/15/2004	10/18/2004	B0099	NA	DND	ND	991	<13.00	<.0043
BN-00454	тем	10/18/2004	10/20/2004	B0106	NA	ND	ND	162 <u>4</u>	<19.00	<.0046
BN-00455	TEM	10/18/2004	10/20/2004	B0106	NA	ND	ND	1624	<19.00	<.0046
BN-00456	TEM	10/18/2004	10/20/2004	B0106	NA	ND	ND	1628	<19.00	<.0045
BN-00459	TEM	10/19/2004	10/21/2004	B0110	NA	ND	ND	575	<7.70	<.0052
BN-00462	TEM	10/19/2004	10/21/2004	B0110	NA	ND	ND	1726	<19.00	<.0043
BN-00463	TEM	10/19/2004	10/21/2004	B0110	NA	ND	ND	1845	<19.00	<.0040
BN-00464	TEM	10/19/2004	10/21/2004	B0110	NA	ND	ND	1677	<19.00	<.0044
BN-00465	TEM <sub>.</sub>	10/19/2004	10/21/2004	B0110	NA	ND	ND	1589	<19.00	<.0047
BN-00466	TEM	10/19/2004	10/21/2004	B0110	NA	ND	ND	1579	<19.00	<.0047
BN-00470	TEM	10/20/2004	10/22/2004	B0112	NA NA	ND	ND	1736	<19.00	<.0043
BN-00471	TEM_	10/20/2004	10/22/2004	B0112	NA	ND	ND	1740	<19.00	<.0043
BN-00472	TEM	10/20/2004	10/22/2004	B0112	NA	ND	ND	1719	<19.00	<.0043
BN-00473	TEM	10/20/2004	10/22/2004	B0112	NA	ND	ND	1502	<19.00	<.0049
BN-00478	ТЕМ	10/20/2004	10/22/2004	B0112	NA	ND	ND	872	<11.00	<.0049
BN-00479	TEM	10/20/2004	10/22/2004	B0112	NA	ND	ND	865	<11.00	<.0049

Libby December 2004

#### Table D-3

# TEM Air Monitoring Samples BNSF Libby Railyard Response Action 2004

		Sample Collection	Sample Analysis			Structures	Structure	Volume		
Sample ID	Method	Date	Date	COC Number	Asbestos Type	≥9.5 μ<5	s ≥0.5 μ	(Liters)	S/mm <sup>2</sup>	S/cc
BN-00480	TEM	10/21/2004	10/23/2004	B0114	L. Amphibole	ND	1	1205	15	0.0049

ND - Not Detected above Method Detection Limits

NA- Not Available/ Not Applicable

S - Structures

cc - Cubic Centimeter

mm - Milllimeter

Table D-4
Personal Air Monitoring Samples
BNSF Libby Railyard Response Action 2004

Sample ID	Туре	Sample Collection Date	Sample Analysis Date	COC Number	Number of Fibers	Volume (Liters)	F/ mm²	F/ec
BN-00133	PCM	7/13/2004	7/21/2004	NA	4	425	<7.0	0.006
BN-00134	PCM	7/13/2004	7/21/2004	NA	2.5	75	<7.0	0.036
BN-00135	PCM	7/13/2004	7/21/2004	NA	4.5	300	<7.0	0.009
BN-00138	PCM	7/14/2004	7/21/2004	NA	8	300	10.2	0.013
BN-00139	PCM	7/14/2004	7/21/2004	NA	1.5	75	<7.0	0.036
BN-00293	PCM	9/24/2004	10/2/2004	B0032	12.5	1118	15.9	0.005
BN-00301	PCM	9/25/2004	10/2/2004	B0046	<5.5	1148	<7.0	<.002
BN-00318	PCM	9/28/2004	10/2/2004	B0047	19.5	1641	24.8	0.006
BN-00324	PCM	9/29/2004	9/30/2004	B0048	13.5	1341	17.2	0.005
BN-00326	PCM	9/29/2004	9/30/2004	B0048	7	1334	8.92	0.003
BN-00332	PCM	9/30/2004	10/2/2004	B0053	9.5	848	12.1	0.005
BN-00334	PCM	9/30/2004	10/2/2004	B0053	<5.5	1217	<7.0	<.002

Table D-5 Soil Disposal Criteria Sampling BNSF Libby Railyard Response Action 2004

• • • • • • • • • • • • • • • • • • • •				NWTPH-Gx	NW1	PH-Dx	,			Tota	l Metals				Volatile	Organic Co	empounds EPA 8260	/B
Location Identifier	7	Date Sampled	Analyzed	1 The Part   1 The Part	Diesel Range Hydrocarbons	Lube Oil Range Hydrocarbons	Süver	Arsenic	Bariem	Cadigium	Chromium	Mercury	Lead	Selezian	Naphthalent	Toluene	1.2.4 Trimethlybenzene	Xylenes
T1-E0-100	B2J0694-01	10/26/2002	10/30/2002	ND	494	1720	20,7	50.1	337	13.8	176	ND	411	ND	NA.	NA	NA	NA
T2-EO-200	B2J0694-06	10/26/2002	10/30/2002	10.3	672	2040	3.11	14.4	296	3.28	44.2	ND	313	ND	1.41	0.267	0.128	0.507
T3-EO-300	B2J0694-11	10/26/2002	10/30/2002	םא	190	576	51.1	18.9	140	21.9	42.5	ND	609	ND_	NA	NA	NA NA	NA
T4-EO-400	B2J0694-16	10/26/2002	10/30/2002	ND	326	1510	7.7	3.11	120	0.903	14.4	ND	47	ND	1.1	ND	ND	ND
T2-WO-200	B2J0694-21	10/26/2002	10/30/2002	ND	162	582	1.43	12.8	366	2.15	48.1	ND	325	ND	0.588	ND	ND	ND
T3-WO-300	B2J0694-26	10/26/2002	10/30/2002	ND	215	847	2.34	3.16	142	0.561	35.2	מא	32.5	ND	0.142	ND	מַא	ND
T4-WO-400	B2I0694-31	10/26/2002	10/30/2002	ND	351	1660	1.33	2.35	167	0.611	11.0	ND	25.5	DN	NA	NA	NA	NA

ND - None Detected

NA - Not Analyzed

Concentrations in milligrams per kilogram (mg/kg)

LIBBY December 2004

Table D-6
Railroad Tie Samples
BNSF Libby Railyard Response Action 2004

Sample 1D	Appearance	Analytical Method	Date Collected	Date Analyzed	Asbestos Percentage	Asbestos Type
TD-i	Brown	PLM	10/6/2004	10/11/2004	ND	NA
TD-2	Brown	PLM	10/6/2004	10/11/2004	ND	NA
TD-3	Brown	PLM	10/6/2004	10/11/2004	ND	NA
TD-4	Brown	PLM	10/6/2004	10/11/2004	ND	NA
TD-5	Brown	PLM	10/6/2004	10/11/2004	ND .	NA
TD-6	Brown	PLM	10/6/2004	10/11/2004	ND	NA
TD-7	Brown	PLM	10/6/2004	10/11/2004	ND	NA
TD-8	Brown	PLM	10/6/2004	10/11/2004	ND	NA
TD-9	Brown	PLM	10/6/2004	10/11/2004	ND	NA
TD-10	Brown	PLM	10/6/2004	10/11/2004	ND	NA
TD-11	Brown	PLM	10/6/2004	10/11/2004	ND	NA
TD-12	Brown	PLM	10/6/2004	10/11/2004	ND	NA
TD-13	Brown	PLM	10/6/2004	10/11/2004	ND	NA
TD-14	Brown	PLM	10/6/2004	10/11/2004	ND	NA
TD-15	Brown	PLM	10/6/2004	10/11/2004	ND	NA
TD-16	Brown	PLM	10/6/2004	10/11/2004	ND	NA
TD-17	Brown	PLM	10/6/2004	10/11/2004	ND	NA
TD-18	Brown	PLM	10/6/2004	10/11/2004	ND	NA
TD-19	Brown	PLM	10/6/2004	10/11/2004	ND	NA
TD-20	Brown	PLM	10/6/2004	10/11/2004	ND	NA
TD-21	Dark Brown	PLM	10/6/2004	10/11/2004	ND	NA
TD-22	Light Brown	PLM	10/6/2004	10/11/2004	ND	NA
TD-23	Dark Brown	PLM	10/6/2004	10/11/2004	ND	NA
TD-24	Dark Brown	PLM	10/6/2004	10/11/2004	ND	NA
TD-25	Light Brown	PLM	10/6/2004	10/11/2004	ND	NA
TD-26	Brown	PLM	10/6/2004	10/11/2004	ND	NA
TD-27	Gray	PLM	10/6/2004	10/11/2004	ND	NA
TD-28	Brown	PLM	10/6/2004	10/11/2004	ND .	NA
TD-29	Light Brown	PLM	10/6/2004	10/11/2004	ND	NA
TD-30	Brown	PLM	10/6/2004	10/11/2004	ND	NA
TD-31	Light Tan/Dark Brown	PLM	10/6/2004	10/11/2004	ND	NA
TD-32	Dark Brown	PLM	10/6/2004	10/11/2004	ND	NA
TD-33	Brown	PLM	10/6/2004	10/11/2004	ND	NA
TD-34	Tan	PLM	10/6/2004	10/11/2004	ND	NA
TD-35	Tan/Brown	PLM	10/6/2004	10/11/2004	ND	NA
TD-36	Tan/Brown	PLM	10/6/2004	10/11/2004	ND	NA
TD-37	Tan	PLM	10/6/2004	10/11/2004	ND	NA
TD-38	Tan/Brown	PLM	10/6/2004	10/11/2004	ND	NA
TD-39	Blackish Brown	PLM	10/6/2004	10/11/2004	ND	NA
TD-40	Dark Brown/Tan	PLM	10/6/2004	10/11/2004	ND	NA .

ND- Not Detected above method detection limits.

NA- Not applicable.

PLM - Polarized Light Micrscopy Method 600.

Samples were analyzed by Analytica Group in Thornton, Colorado.

Samples were 1/4-inch diameter cores of railroad ties.

# Appendix E

**Construction Quality Assurance** 

# Appendix E-1 **Soil Compaction Data**

	Time Departed	_
82	Arrived on Site	
	Departed Site	
썢	Arrived Office	_

Mileage Start	
Mileage End	
Total Mileage	

HKM Engineering PO Box 31318 Billings MT 59107 (406)658-6389

	M	aterial Ty	RQ.			FIEL	D Di	ENSIT	Y TES	TS							<del>"</del>
ÆB=E	mbankme	nt FIN				I	ура Те	si	F	roject:		166	<u>,                                     </u>		SI	heet No:	
TB=T	rench Bac	kfill	FB=Foundation Backfiti			N6=	•6" Nu	clear	Proj	ect No;					Ga	uge No:	13807
RB=F	load Base		RE= Roadway Embankment			\$6=6	" San	dcone	Óŗ	perator:	7.	Eric	Usin		Sta	ndards:	AS 3/6/ 1459P
				CL	Dutan	<b>A</b> # - 411		Labor				Field					
Test No	Date	Station	Location	Offset	Below FG	Mat'l Type	Type Test	OMC %_	Max. Dens.	% Moist	Dry Dens.	Moist Var	% Comp	% Req.	(F)	Retest Yes/No	Remarks
9	rolfoy	7450		21	-	10	Np	6.0	1377	3.6	134.4	3.4	96.7	95		\	
10	10/4/04	7450	Trock #1	50'	1	1s	No.	60	137.7	4.3	ر درا		25.7				
11	14/5/04	3,50	Track de	XX	-	15	1/2	60	139.7	60	1326	_	35.0	95			
12	10/5/04	3,00		_ <		10	NF	4 -	1		133.3	ō. >	454	95			
נו	1/5/04	405		<b>一</b> ぐ		1/13	Wg	60	139.7	5.4	1347	0.6	96.0	95			
							ļ. <u></u>				<u> </u>						
78	10/1/04	4,50		-3'RF		18	W <sub>g</sub>	6.0	139.7	3.9	119.7	2,2	124	95	F	У	
6 <sub>R</sub>	1/1/04	5,00	Track #1	1	-	PB	Np	6.0		4.4		7.6	95.6	95		Y	Post of the
14	10/4/04	6100	7	_ <		10	Ng	600	139.7	5.0	135.7	1.0	97.1	95			
15	duloy	1100	•	- (	1	PO	Ne	6.0	1327	5.0	133.1	1.0	95.3	95		! ———— !	
72	10/11/04	4450		- E	_	PO	NE	4.0	139.7	?7	134.	2.3	961	95			
Com	ments: /	0/1/0		603 - 604									•	Аррго	wed B	y:	
					200				Oli 14 -	Diag		4.4.4					
Type	of Obser	ration:	□ Full Time □ On Call □ P	art Time	Other	r 			CHARTS	Kepres	entative	AUVIS			: <u></u>	<u>-</u>	عومنني سيدون

أمدر

12

Mileage Start	
Mileage End	
Total Mileage	

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	M	aterial Ty	229		· •	FIEL	D DE	NSIT	Y TES	rs	,	1. 1					
B=E	mbankme	int Fill				Ė	pe Te	<u>st</u>	P	roject:	<u></u>	<u>6.67</u>			Sh	eet No:	3
B≕T	rench Bad	:kfill	FB=Foundation Backfill			N6=	6° Nuc	:lear	Proje	ect No:					Ga	uge No:	13501
B=R	load Base	·	RE= Roadway Embankment			S6=6	" Sano	Эсопе	Ор	erator:	7.2	me A	son		Sta	ndards:	169 1
								Labor				Field					
'est No	Date	Station	Location	CL Offset	Below FG	Mat'l Type	Type Test	OMC %	Max. Dens.	% Moist	Dry Dens,	Moist Var	% Comp	% Req.	Fail (F)	Retest Yes/No	Remarks
16	16/1/04	8+50		-2	_	10	41	6.0	139.7		139,	7.2	49.6	95	-		
7	10/1/04		Trock #1			75	1/2	60	139.7	5.7	136.4	ā,	97.6	25			
ρ	10/1/04	9450	Trock 4.	_ ∠	1	70	No.	6.0	139,2	5.4	132.4	0.6	94.9	2,5	F		
~			Trock#,	_	į			6.0			133,3	0.7	75.4	25		y	Possed
>	19/11/04	120	Track #1	10.11	1	To	Ng	6.0	139.7	5.6	137.5	o.y	99.0	95	_		
,	14/104	10 750	Trock #1					!							<u> </u>	<u> </u>	Passed but not re
	10/11/04	11400	Trock No	41 RF	. –	K	N <sub>p</sub>	6.0	139.7	4.0	<del></del>	<del></del>	99.5				
<b>}</b> —	10/11/04	11450	Track #1	31 A+	_	B	Np	6.0		↓	136.1			4			
3	10/11/04	12700	<u> </u>		-	RB	Wp	6.0	<u> </u>	4.5		+-		+	ļ	<u> </u>	<u> </u>
1	10/11/04	12750		<u>£</u>	_	10	W <sub>F</sub>	6.0		<b></b> -	134.	1.6	_		_	<u> </u>	
5	10/11/04	13+00	Track H,		_	15	Np	6.0	139. 7	4.3	138.6	7.7	79.2	95			
NED!	nents:										_		- -	Арри	roved 1	By:	
_	-1 Db		□ Full Time □ On Call □ F	Part Tirne	□ Othe				Client	Renn	sentativ	a Artyle	sed 🗆			<del></del> -	
쯘	ol Obser	radon:	Grantine Gon Call Gr	- SIL HIFT	- Olue	i <b>T</b>			Cheric	- value							\$22

	Arrived Departe	on Site	<del></del>		•	∕lileag	e End									;	Billings MT 50	107
	W	aterial Ty	ре	<del></del>	<u> </u>	FIE	D DI	ENSIT						<del></del>	<del></del>		·	<del>-</del>
⊫Eπ	nbankme	nt FIN				1	уре Те	<u>st</u>	F	roject:	<u> Lu</u>	6/4	<u>.</u>		SI	neet No:	4	<u>.                                    </u>
₽Τπ	ench Bac	kfill	FB=Foundation Backfilt			N6:	=6" Nuc	clear	Ргој	ect No:					Ga	uge No:	1350	2
3≠R¢	oad Base		RE= Roadway Embankment			\$6 <b>≈</b> (	s" Sano			erator:	1.12	_	Ejon		\$la	ndards:	2169	10601
4				CI	Balow	Mail	Toma			•/	Day	Field	1 4/	-	<b>.</b>	Datasa		
	Date	Station	Location	Offset	FG			%	Dens.	Moist		Var					Remarks	
6	Mulay	13450	Track #1	- 6		10	NP	6.0	139.7	4.0	138.5	2.0	99.1	95				
7	10/11/04	14400	Track #1	-6	_	5	NF	4.0	139.7	3.7	139.3	23	94.0	95				
F		<del></del>	+	-12	_	Ko	1/8	6.0	139.7	4.7	138.4	7.3	99.2	95				
9	10/1/0-1	15400	Trock #1	<u>£</u>		RO	No	6.0	139.7	4.9	138.7	7.1	99.3	95				
30	10/11/2	15+50	Trock 41	-12	_	1/4		<del>}</del>		<u> </u>	J	ō.c	96.9	25	<b> </b>			
- 1				2.		10		4.0	1397	5.0					-			
		"		77		<del>                                     </del>	+	<del>                                     </del>		-		-	<del> </del> -					
-	10/11	16/5	Track 41			1	W	6.0	132.2	4,9	136.2	7.1	929	95				
	10/1	17,	<u> </u>	51			<del>                                     </del>		<del> </del>		<del> </del>	•	+					·
			· · · · · · · · · · · · · · · · · · ·	Rt		10	<del>-</del>	.1	<del></del>		_	_	95	<del> </del> -	<u>.                                    </u>			
55	19/2/04		<u> </u>	11		B	<del></del> -	<del></del>	<del> </del> -			2.4	7.7	75				
L	10/10/04	18100	Trock 4/	N/	- 🕳	B	Np	6.0	138.7	2.9	35.1	3,,	16.7	95			-	
/ 0	ments: //2/	94	05= 467 MS=	606								·		Appro	ved B	<i>f</i> :		
ype	of Obser	vation:	□ Full Time □ On Call □	Part Time	C Othe	T			Client's	Repres	entative	Advis	ed 🖸				· · · · · · · · · · · · · · · · · · ·	<del></del>
	10 6 7 6 9 6 6 7 6 6 7 6 6 7 6 6 7 6 6 7 6 6 7 6 6 7 6 6 7 6 6 7 6 6 7	Arrived Departe Arrived  Marrived  Embankme Embankme  Arrived  Marrived  Mar	Arrived on Site Departed Site Arrived Office  Material To  Material To	Material Type  Describents when the second section is a part of the section of th	Arrived on Site	Arrived on Site	Arrived On Site Mileag Total Material Type FIEI  Departed Site Arrived Office FIEI  Departed Site	Arrived on Site	Arrived on Site Departed Site Arrived Office Total Mileage End End Mileage End End Mileage End	Arrived On Site	Material Type	Mileage End   Total Mileage   Total Mileage	Mileage End   Mileage   Mileage	Mileage End   Fire Death Site   Departed Site   Arrived Office   Total Mileage   Total Milea				

Arr De	ne Departer ived on Site parted Site ived Office		•	N	fileage fileage otal Mi	End					•					RM Engineering PO 80x 31348 Historyk MT 88107 (408)838-6388	
	Material	Type	,		FIEL	D DE	NSIT	Y TES	ts				-			-	
-Embar	Nument Fill				ľ	roo Te	<u>\$1</u>	P	roject:	4	<u>663</u>	<u> </u>			west No:		
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Comments: 10/15/04 DS=2179, MS 599

Approved By:

Type of Observation:     Full Time   On Call   Part Time   Other   Client's Representative Advis						
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On Call O Part Time

10/28/04

Type of Observation:

Client's Representative Advised 🖸

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On Call | Part Time

9/28/2004

Client's Representative Advised [

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# **ENVIROCOM**

4381 Highway 2 West PO Box 649 Libby, MT 59923 TEL (406) 293-8659 FAX (406) 293-45145

# SUBMITTAL/

			TRANSMI	TTAL		
Date:	9/1/	04		Submi	ittal #:	001
Project	BNS 2004	F Libby Rail Yard Respo	onse Action -	Revision	on #:	
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# BURLINGTON NORTHERN SANTA FE RAILWAY - ENGINEERING CONTRACTOR SAFETY ACTION PLAN

## Please PRINT this page for your records.

#### [FrontPage Save Results Component]

Thank you for submitting your safety action plan.

This is a copy of your plan that has been submitted.

Use the toolbar and press (file) then (print) to print this Safety Action Plan. If you need any reprints of this Action Plan there will be a \$5.00 charge.

Today's Date 08/31/2004

#### I. GENERAL INFORMATION

Your Name

Douglas G. Tisdell

Company Name

Envirocon Inc.

Company Address

101 International Way

Company City

Missoula

Company State

MT

Company Zip

59808

Phone Number

406 523-1150

Scope of Work

Remove, decontaminate and load rails and ties, Excavate, transport and dispose of Libby Amphibole and hydrated biotite contaminated soils, import and place backfill materials to specified grade.

Location of Project/Work Libby Rail Yard, Libby Montana

Anticipated timeframe of project, from 9/1/04 to 11/24/04 (date).

On-Site Supervisor Brian Vibbert Phone 406 546-9551
On-Site Safety Coordinator Douglas G. Tisdell Phone 406 544-6883
BNSF Project Representative Arnie Olson Phone 208-267-6813

#### II. COMPANY INJURY HISTORY

Frequency Rate = # of reportable injuries x 200,000 divided by the # of actual manhours

Severity Rate = # of lost days x 200,000 divided by the actual manhours

Frequency and Severity Rates for Each of the Last Three Calendar Years:

Year 2001 Frequency 3.08 Severity 3.6

Year 2002 Frequency 2.58 Severity 5.7

Year 2003 Frequency 2.20 Severity 4.1

List some areas of concern (e.g. sprains/strains, back injuries, vehicle operations)
Envirocon is emphasizing internal severity measures to include all incidents not just OSHA incidents. A primary area of concern is equipment damage.

How are you addressing these areas of concern?

Envirocon is addressing these areas of concern through monthly project evaluations, regional operations performance matrix, plan of the day, daily safety meetings, and incentives to regional managers based on improvement.

#### III. JOB SAFETY BRIEFINGS

The below statements <u>must be checked</u> and implemented within your safety plan; by checking these statements you affirm that they will be accomplished. This Safety Action Plan will not be accepted unless these are checked.

YES Job Safety Briefings will be completed at the start of the work shift and as needed during the course of the day; e.g., personnel changes, weather changes, and/or changes in assignments.

YES Job Safety Briefings will include Emergency Preparedness Information and summarize the findings of Risk Assessment activities.

#### IV. EMPLOYEE TRAINING

The below statements must be checked and implemented within your safety plan; by checking these statements you affirm that they will be accomplished. This Safety Action Plan will not be accepted unless these are checked.

YES <u>All</u> employees working on-site at BNSF have completed the BNSF Engineering Contractor Safety Orientation Program.

YES All employees working on-site, who will be working within 25' of track centerline, have completed annual Roadway Worker Protection/On-Track Safety Training.

Check below, other required safety training conducted by/through the contractor company in which your employees, who will be working on BNSF property. Copies of training programs do not need to be provided. BNSF does not conduct safety training for personnel other than BNSF employees. Safety Training needs to be conducted by/through the contractor company.

YES Asbestos
Lead Safety
YES Excavation
YES DOT Training
Fall Protection/Bridge Worker Safety
Confined Space
yes Lockout/Tagout
yes Hazardous Waste
yes Hearing Conservation
yes Respiratory Protection
yes Hazard Communications
yes Personal Protective Equipment

Other Other

#### V. EMERGENCY PREPAREDNESS

Written Emergency Preparedness information needs to be at the job-site with work groups. For projects in fixed work locations complete the following. For work groups that will be on the move during the course of a project this information needs to be updated as necessary and maintained with each work group.

The BNSF 24-hour Emergency Phone Number is 1-800-832-5452

The below statements must be checked and implemented within you safety plan; by checking these statements you affirm that they will be accomplished. This Safety Action Plan will not be accepted unless these are checked.

Job Safety Briefings will include emergency preparedness information.

Copies of Material Safety Data Sheets (MSDSs) for hazardous materials will be provided to the BNSF Project Representative and be maintained on-site.

#### Identify Responding Agencies

	Аделсу	Telephone	Est. Resp. Time
Medical	St Johns Lutheran Hospital	406 293-0100	5 min.
Fire	Libby Fire Dept.	911	5 min.
Police	Libby Police Dept.	911	3 min.

Verify communications: landline radio YES cellular telephone Employee assigned to make call and his/her back-up Brian Vibbert Backup employee to also make the call Douglas G. Tlsdell

The below statements <u>must be checked</u> and implemented within you safety plan; by checking these statements you affirm that they will be accomplished. This Safety Action Plan will not be accepted unless these are checked.

YES First Aid and CPR trained employees will be at the job-site(s) and identified during job safety briefings.

YES A First Aid Kit will be available at the job-site.

Latitude/longitude coordinates of job-site (optional)

Written directions to job-site

From Hwy 2 West, take Hwy, 37 North approx 0.6 miles, turn right immediately after crossing rail yard over pass, proceed into work site.

Note: May be necessary to assign an employee to meet emergency response personnel at an intersection. To be determined at site.

#### VI. FIRE PREVENTION

Hot Work activities will be performed on BNSF property?: Yes NO No

The below statements <u>must be checked</u> and implemented within you safety plan; by checking these statements you affirm that they will be accomplished. This Safety Action Plan will not be accepted unless these are checked.

YES Risk Assessment activities and Job Safety Briefings will identify procedures/strategies, and equipment available for fire prevention and suppression, as well as, locations where suppression equipment will be staged.

YES In Right-of-Way areas, the local fire agency is contacted to check possible hot work bans or restrictions, and to determine ability of local agency to provide emergency assistance.

YES In Right-of-Way areas, the BNSF Engineering Right-of-Way Fire Prevention Risk Assessment form will be completed and maintained on the job-site.

yes All right-of-way fires are to be reported to the responsible BNSF Project Representative.

List fire prevention and suppression equipment on-site.

Water truck, fire extinguishers, water storage tank with pressure sprayer

#### VII. SAFETY AUDITING

Formal safety audits of on-site work activities will be conducted at the following frequency e.g. twice/week, weekly: weekly

The below statements <u>must be checked</u> and implemented within your safety plan; by checking these statements you affirm that they will be accomplished. This Safety Action Plan will not be accepted unless these are checked.

YES Assessments will include assessment of work behavior, as well as the identification of physical hazards.

YES Reports of audit findings will be available at the job-site for review by BNSF auditors.

Formal Safety Audits will be conducted by (job title); e.g., on-site supervisor, insurance carrier representative, safety committee

Title
Safety Supervisor
Superintendant
Project Manager

#### IX. ROADWAY WORKER PROTECTION/ON-TRACK SAFETY INFORMATION

In addition to Job Safety Briefings, briefly describe how safety-related information is coordinated within your organization; e.g., safety committee meetings, voicemail systems, mass mailings, job-site postings, etc.

Daily toolbox safety meetings, weekly safety managers meeting, e-mail briefings of safety and health related items, lessons learned from safety websites of incidents and problems encountered by other companies.

For contractors working within 25 feet of track centerline. Must mark what applies to your work group.

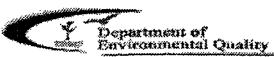
Have own roadway worker protection plan/on-track safety program

yes Will use the BNSF on-track safety program (Engineering instruction No. 1.1)

Not Applicable (No workers within 25 feet of track centerline)

A COPY OF YOUR COMPLETED SAFETY ACTION PLAN UPON SUBMISSION, WILL BE FORWARDED TO THE WEBMASTER OF THIS SITE. ADDITIONALLY, PRINT A COPY OF THIS SAFETY ACTION PLAN AND KEEP A MASTER COPY, AND PROVIDE A HARD COPY TO YOUR BNSF REPRESENTATIVE, AND TO EACH OF YOUR ON-SITE WORK GROUPS.

FOR CONTRACTOR WORK GROUPS WORKING WITHIN 25' OF TRACK CENTER-LINE, A COPY OF YOUR ROADWAY WORKER PROTECTION/ON-TRACK SAFETY PROGRAM MUST BE MAINTAINED WITH EACH WORKGROUP. CONTRACTORS WHO ELECT TO ADOPT THE BNSF ON-TRACK SAFETY PROGRAM MUST MAINTAIN A COPY OF BNSF ENGINEERING INSTRUCTION NO. 1.1 WITH EACH WORK GROUP.



Waste & Underground Storage Tank Management Buresu 

Asbestos Control Program 

P.O. Box 200901 

Helena MT 59620-0901 

(406) 444-5300

# APPLICATION FOR A MONTANA ASBESTOS ABATEMENT PROJECT PERMIT AND NESHAP DEMOLITION/RENOVATION NOTIFICATION

DEQ USE ONLY	PLEASE FILL IN THE FOLLOWING
Arr	ount of Initial fee submitted with your
Notification Received Date Ap	plication LIBBY SUPERFUND X/A
Notification Postmark Date	Check Number
ACCOT FUND ORG	Final or Revision Fee
502702 02202 5132	Check Number
TOBEFILIEDA	OUT BY APPUCANT
Type of Notification	
☐ Original ☐ Revised	
Does Facility have an annual permit?	Yes If Yes Permit Number
Does Facility have an armusi permit?	165 W 165 Fellill (Volide)
Туре	f Operation
☐ Renovation ☐ Annual ☐	Ordered Demolition
Demolition Courtesy	Emergency Renovation   □ Disposal
ASBESTOS ABATEMENT CONTRACTOR (Operator)	SITE LOCATION
	2 455 2. VID
EN 1 : RDCCN ENCOMPANY Name	BNSF BALL YARD Building Name / Site
10/ TWTERNATIONAL WAY	Between downtern Libry and The Kottener Bive
MISSOULA NOT 59808	LIZBY INT 59923 LINCOLN County
	City State Zip County
#66         523-1150         #66         543-7987           Telephone Number         Fax Number	Site Telephone Number Arnie Olson
Donglas G	Owners Representative - Dave Smith
Douglas G1. TIJS dell	Outpers Representative - Dave Smith Location Contact Person  W/A  Building Size (sq. ft.)  Number of Floors  Age of Site in Years
	Building Size (sq. ft.) Number of Floors Age of Site in Years
MTA 2602 - CS /-8-05  Montana Accreditation Number Expiration Date	
DEMOLITION/RENOVATION CONTRACTOR (Operator)	SITE OWNER
	BNSF Bailury Company
Contractor, Individual or Company Name	Owner Hame Company
Mailing Address	139 N. Last Chance Gulch
	Helena mt 59601 L+C
City State Zip County	(208) 247 - 6813
Telephone Number Fex Number	Telephone Number
	Arnie Olson
Contractor Contact Person	Contact Person for Owner

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Rail Yard		il Yard	KENA		VIKS C	CAI SE/LTA	VTS
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Waste Transporter #1	Waste Transporter #2 (If applicable)
Envirocov Inc. Contractor, Individual or Company Name	Contractor, Individual or Company Name
101 International Way	
Mailing Address	Mailing Address
MISSOULA MIT SERDE MISSOULA	City State Zip County
404 523-1150	1.7
Telephone Number	Telephone Number
Jeff Mikell Contact Person	Contact Person
Waste Disposal Site	. <del>.</del>
LIBBY LANDFILL	
Site Name	
Mailing Address	
LIBBY MT 59923 LINCOLN	
G/A	
Telephone Number Permit Number	
FOR EMERGENCY.	RENOVATIONS
Date of Emergency	
(Start Date) (Complete	Date)
Description of the sudden, unexpected	
event.	· · · · · · · · · · · · · · · · · · ·
IF DEMOLITION IS ORDERED BY A GOVER	NMENT AGENCY OF FASE IDENTIFY
Agency Name	Title
<del></del>	Date ordered to begin
Authority	Date of Order
Description of procedures to be followed All work p	erformed using wet method
in the event unexpected asbestos is found or previously non-friable asbestos material	
becomes crumbled, pulverized, or Profective Es	upment,
reduced to powder	
THIS SECTION APPLIES TO FACILITY	DEMOLITIONS/RENOVATIONS
I certify that the above information is correct and that a State-accredited asbes	
	•
Signature	Dube
THIS SECTION APPLIES TO ASBES	TOS ABATEMENT PROJECTS
I certify that all work performed pursuant to the authorization of the Asbestos A	batement Project Permit will be performed in accordance with 29 CFR
1926.1101, 40 CFR 763 subpart E, 40 CFR 763.120, 40 CFR 763.121, 40 CF and ARM 17.74.301 through 406. In addition, I hereby certify all esbestos-con	taining waste materials removed during this project will be transported
properly and disposed of in a State-approved Class (  landfill or similar approve	d esbestos disposel facility.
Dry de 1	8/24/04

ı

# HEALTH AND SAFETY DOCUMENT SIGNATURE PAGE

I have read and understand the safety rules described in the Health and Safety Plan. NAME SIGNATURE **COMPANY** DATE

# **Approvais**

Jeff Mikell	Envirocon Project Manager	
Name	Title	—
Jumm	9-1-04	
Signature	Date	
Douglas G. Tisdell	Envirocon Health and Safety Supervisor	
Name	Title	
O 1. 11		
(Variata) 2	stell 09-01-04	
Signature	Data	

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# **APPENDICES**

Appendix A: Voluntary Emergency Data Form

#### A. SITE INTRODUCTION

This task-specific Health and Safety Plan (HASP) provides safety-related information and requirements specific to the task and work location(s) described. General requirements contained in the Contractor Requirements for the Libby Rail Yard Asbestiform Fiber Removal and the Envirocon Health and Safety Program Manual along with this task-specific HASP will be implemented except where noted. Significant changes to this HASP shall be documented and approved using a field change request or re-submittal of a revised task-specific HASP.

#### A.1. Scope

This HASP applies to Burlington Northern and Santa Fe Railroad Company Libby Rail Yard Asbestiform Fiber Removal project located in Libby, Montana.

## A.1.a. Site History

The Burlington Northern and Santa Fe Railroad Company Libby Rail Yard facility is located between downtown Libby, Lincoln County, Montana and the Kootenai River to the north. The Libby Railyard was used historically to weigh and switch railroad cars used to ship hydrated biotite, which can contain asbestos including asbestiform fibers of Libby Amphibole. Historical activities have resulted in contamination of near surface soils. The project site is approximately six acres, with a total of six rail lines trending east-west along with associated buildings and siding platforms.

The primary contaminant of concern is Libby Amphibole and hydrated-biotite contaminated soils under the track ballast and surrounding cover soils. The existing ground cover at the facility includes track ballast, gravel, grass and weeds. Historically, several buildings may have existed on the site. Intact concrete foundation walls and concrete slabs are still present at the facility.

# A.2. Description of Tasks

The scope of work associated with this project includes (but is not limited to) supervision, labor, equipment and expertise to perform the Remediation of the Burlington Northern and Santa Fe Railroad Company Libby Rail Yard in Libby, Montana. This includes the following job task descriptions:

- Site Mobilization;
- Install a temporary perimeter fence around the Rail Yard Exclusion Zone area;
- · Construct equipment decontamination pad;
- Establish water supply system for dust suppression systems and decontamination facilities on site;
- Establish water supply system to provide water for decontamination facilities at the landfill;
- Furnish wastewater treatment system at site for decontamination facilities;
- Remove, decontaminate, and load track rail for transport;

- · Remove, decontaminate, and load ties for transport and disposal;
- Remove surface debris;
- Excavate contaminated soils;
- Transportation of waste materials to the Libby landfill;
- Landfill disposal as detailed;
- Import and place backfill material; and
- Facility reclamation.

#### B. BASIS

This section will discuss the basis in regulations, standards and policies for the project. It includes OSHA regulations and Envirocon policies and procedures.

#### **B.1.** Preparation and Approval

This plan is based upon existing available information regarding the site and upon past experience at other sites. This document is also based on OSHA regulations, contractual specifications applicable to the scope of work, the client's health and safety plans and procedures, Envirocon's Health and Safety Program, and Envirocon policies and procedures. This document describes the Task-specific implementation of those policies and procedures. Envirocon personnel and lower tier subcontractors are required to adhere to all of these documents during the course of this project. Some of the applicable regulations and standards are described in Table 0:

#### B.1.a. Prepared For

This plan was prepared for:

Kennedy / Jenks Consultants Environmental Management Resources, Inc.

## B.1.b. Prepared By

Loren Gunderson, CIH, CSP Envirocon, Inc. 651 Corporate Circle Suite 114 Golden, Colorado 80401

# **B.1.c.** Approvals and Modifications

This plan and future changes must be approved as follows:

- After preparation and approval by Envirocon, this plan will be submitted to the client's representative in accordance with the applicable contract and specifications.
- Envirocon's designated Project Manager is responsible for the final approval of this plan before transmittal to the client.
- Envirocon's Corporate Director of Health and Safety or designated representative is responsible for approval of this plan and any future modifications after preparation. Note: Certified Envirocon Safety and Health Professionals (CIH or CSP) are hereby designated to approve changes to this plan for the Director.

# **B.2.** Zero Incident Performance (ZIP)

Zero Incident Performance means error-free project execution: no injuries, illnesses, property damage, community or environmental impacts, or incidents that could have resulted in these occurrences under different conditions. Zero Incident Performance does not happen by chance: It is achievable through the integration of safety into all management systems, the project process, and individual efforts. We believe that all incidents are preventable. This objective serves as the primary basis for this HASP.

#### B.3. Policies and Regulatory Basis

Table 0 Some Important Applicable Regulations and Standards		
Latest revision	Contract Specifications applicable to the scope of work.	
BNSF	Safety Rules and General Responsibilities	
29 CFR 1910.20	Access to employee exposure and medical records	
29 CFR 1910.38	Employee emergency plans	
29 CFR 1910.95	Occupational noise exposure	
29 CFR 1910.134	Respiratory protection	
29 CFR 1910.120	Hazardous waste operations	
29 CFR 1910.151	Medical services and first aid kit	
29 CFR 1910.157	Portable fire extinguisher	
29 CFR 1910.1000	Air contaminants	
29 CFR 1910.1001	Asbestos	
29 CFR 1910.1200	Hazard communication	
29 CFR 1926	Construction Industry Standards	

## B.4. Changing Conditions and Daily Postings

# **B.4.a.** Identification of Changes

The plan presents a realistic approach to the anticipated hazards at the site. It is expected that site conditions may vary throughout the duration of the project. This plan will be modified as necessary to respond to changing conditions and/or scope of work. Changes in conditions and identification of previously unrecognized hazards are identified by the following processes:

- o site inspections by supervisory and site safety personnel
- o observations and suggestions by all personnel
- o proper planning for each new phase of operations
- o Activity Hazard Analysis (AHA) for each new phase of operations
- o communicating plans and controls to all effected employees
- o accident investigations and lessons learned from this and other projects
- o contract modification

# B.4.b. Response to Changes

Adjustments to procedures may be required. The Health and Safety Supervisor will be responsible for developing the response to these changes.

- o New procedures and/or tasks will be addressed by a new or modified AHA.
- Changes in PPE and/or monitoring requirements will be modified by briefing the crew.
- o Significant changes to this HASP shall be documented.
- Changes in PPE and AHAs will be discussed in the morning safety meeting, by special safety
  meetings held as necessary throughout the day, and by postings.

#### B.5. HASP and AHA Familiarization

The information presented in this plan will be reviewed with the employees during task-specific training to be completed before working on site. These site entry briefings will focus on the specific tasks of those being briefed. A copy of this plan will be available at all times on the site for any one to review thoroughly. As the project initiates new tasks on site, the crews for those tasks will be briefed on the appropriate AHA(s). AHAs will highlight applicable controls from this plan. All assigned personnel, visitors, and regulatory personnel will document their familiarity with the AHA by signing a training acknowledgment. Copies of training acknowledgments for Envirocon employees, vendors, and subcontractors will be individually maintained in Envirocon's Health and Safety files. AHA trained individuals are therefore expected to be familiar with and comply with all aspects of this plan. If the safety requirements are unclear each individual is responsible for getting clarification from their supervisor. The qualifications required for various tasks on this project are summarized in the training and qualifications section below.

## **B.6.** Compliance

Failure to follow the rules and procedures prescribed in this document potentially jeopardizes the working environment of other employees. For this reason, Envirocon is prepared to enforce the progressive disciplinary procedures described in the site control section of this document for those who fail to follow the established policies and procedures for this project.

#### C. SITE ORGANIZATION AND KEY PERSONNEL

29 CFR 1910.120 requires an effective site organization to be responsible for supervision of all work at hazardous waste sites. The purpose of this section is to describe this site's organization as it applies to this project.

## C.1. Project Manager: Jeff Mikell

The Project Manager is responsible for oversight and management of all aspects of the project including health and safety, quality assurance, construction, remedial design, equipment, and personnel.

The Project Manager is responsible for project health and safety performance in accordance with ZIP goals.

- Conducting periodic site inspections.
- o Participating in incident investigations.
- o Provides safety leadership through example and by holding all personnel assigned to this project accountable for their safety responsibilities.

## C.2. Site Superintendent / Safety Officer: Brian Vibbert

The site supervisor is responsible for coordinating activities with the project manager and site safety officer. This includes:

- o enforcing the provisions of this HASP;
- preparing for new tasks in advance of field operations in accordance with the Envirocon Field Operations Manual;
- o ensuring that an AHA has been completed before any new work commences; and
- o briefing crew members before assigning them to the new task;
- o ensuring that employee safety suggestions are fairly and respectfully evaluated, and that employees are informed of the outcome of the evaluations;
- o monitoring the conduct of operations in the field to ensure safe delivery of a quality product for the client;
- o supervising subcontractors in accordance with this plan;
- o site emergency coordinator and
- o ensuring that injured personnel (with or without life threatening injuries) are escorted to medical treatment by the safety officer or other supervisory personnel.

# C.3. Corporate Director Health and Safety: Joseph Ocken, CIH, CSP, CHMM

Envirocon's Corporate Director of Health and Safety is responsible for the development and implementation of the Corporate Health and Safety Program. The program contains Envirocon's accident prevention plans and procedures and other related plans, policies and procedures required by OSHA standards. The Corporate Director is responsible for:

- ensuring that all health and safety issues on site are resolved;
- o ensuring that employee complaints are addressed in accordance with Envirocon policies and procedures; and applicable laws;
- o ensuring that all confidential employee complaints received by the director are kept confidential;
- o ensuring appropriate investigation of all incident reports;
- o ensuring that audit findings are corrected in accordance with Envirocon policies and procedures; and applicable laws; and
- o providing professional support for the project manager's health and safety program.

## C.4. Health and Safety Supervisor / Asbestos Technical Advisor: Doug Tisdell

The Project Health and Safety Officer (HSS) / Asbestos Program Manager assigned to the project is responsible for the following:

- o developing and implementing the Project Manager's task-specific health and safety program and procedures;
- o providing professional technical support for the Project Manager with regard to all matters of health and safety associated with the project;
- o developing and reviewing project health and safety procedures, hazard analysis and other supporting documents;
- o implementing and administers this HASP;
- o performs site inspections to include frequent visits to the work site and haul route;
- o maintaining site safety records including safety meetings, training, air monitoring, and accident/incident investigation.
- o conducts periodic audits of the project site for the Corporate Director;
- o coordinating all health and safety activities with the Project Manager;
- o alternate site emergency coordinator, and
- o in the event that personnel fail to adhere to established safety guidelines, recommending disciplinary and/or corrective actions to the Project Manager.

## C.5. Site Competent Persons

OSHA's general safety and health provisions from the construction industry standards (29 CFR 1926.20(b)) include accident prevention responsibilities. Such programs shall provide for frequent and regular inspections of the job sites, materials, and equipment to be made by competent persons designated by the employers. OSHA's regulations regarding scaffolding, excavation and hazardous waste operations have similar requirements. The construction safety competent person is defined in 29 CFR 1926.32 to mean "one who is capable of identifying existing and predictable hazards in the surroundings

or working conditions which are unsanitary, hazardous, or dangerous to employees, and who has authorization to take prompt corrective measures to eliminate them."

Competent persons are designated on the form that follows this section. Each competent person is given responsibility and authority for certain aspects of safety on site. It is important for each competent person to recognize the limits of their own knowledge, training, experience and capability. It is the responsibility of each competent person to act within the limits of their own knowledge, training, experience and capabilities.

## C.5.a. Site Safety Competent Persons

The HSS(s) serve as the general site competent person (SCP) responsible for accident prevention in accordance with 29 CFR 1926.20. The competent person is responsible for, and authorized to act to ensure that personnel are not working under conditions, which are unsanitary, hazardous, or dangerous to their health or safety.

The competent person's accident prevention responsibilities includes

- o frequent and regular inspections of the job site,
- o inspections of materials on site, and
- o inspection of equipment on site.

The project manager may designate additional competent persons.

Designated and authorized persons, in accordance with 29 CFR 1926.32, must be capable of identifying existing and predictable hazards in the surroundings or working conditions which are unsanitary, hazardous, or dangerous to employees.

Once designated and authorized, these competent persons share Envirocon's authority to take prompt corrective measures to eliminate these hazards.

## C.5.b. Excavation Competent Person (as designated in the table below)

This individual will have direct supervisory control over all excavation activities involving entry into excavations or trenches. All competent and authorized persons shall acknowledge their responsibility by signing the Competent Person Designation Form below.

## Compliance standards

The excavation competent person ensures compliance with 29 CFR 1926, Subpart P (1926.650 through 652). The scope of these regulations include all excavations (e.g., hand digging, equipment excavation, with or without personnel entry). Additional competent persons may be designated by the Project Manager in consultation with the Corporate Director of Health and Safety. Designation will be based on experience and knowledge of these standards.

## Specific duties include:

 Assists supervisor with planning excavations obtaining such information as to completely and correctly execute the activity. Ensures that utilities are located and marked (underground or overhead hazards) prior to excavating. Hand dig to locate when excavating within six feet of utilities.

- o Where personnel entries are involved, classifies soils in accordance with OSHA soil classification in 29 CFR 1926 Subpart P.
- o Ensures the use of protective systems in accordance with Subpart P where personnel entries are required.
- Monitors all excavation activities for associated hazards.
- o The competent person is authorized by Envirocon to take corrective action to eliminate hazardous or dangerous situations. This includes halting excavation operations and/or removing personnel from excavations.
- Performs inspections of excavations prior to the start of work, and as needed throughout the shift and after every rainstorm.

### C.6. Lower Tier Subcontractors

Lower Tier Subcontractors are responsible for supervising their work and personnel in accordance with this plan and applicable site policies and procedures. Regardless of other requirements, lower tier subcontractors shall adhere to all BNSF, federal, state and local laws and regulations. In particular this includes the requirements of 29 CFR 1910.120/1926.65 HAZWOPER Standards. Lower tier subcontractors personnel will be supervised in accordance with the same requirements and standards as Envirocon and subcontractor personnel. Where their programs, policies and procedures exceed the requirements of this document and the applicable site policies and procedures, the lower tier subcontractor may use their own policies and procedures to implement these requirements, otherwise they must adopt this document. When a lower tier subcontractor intends to implement a policy more stringent than an AHA in place, such field changes shall be made in the AHA to document implementation of the policy.

#### C.6.a. Site Access Control

Envirocon is in part responsible for controlling access to this site along with our client. Envirocon reserves the right to deny access to Envirocon personnel All other personnel who are not otherwise qualified or appropriately (PPE) protected to work on site may be denied access.

This safety plan does not necessarily address all of the hazards specific to lower tier subcontractors' work. Lower tier subcontractors shall submit either a task-specific health and safety plan for their particular operation(s) or prepare and submit appropriate Activity Hazard Analysis(ses) to append to this plan.

## C.7. Competent Person Designation Form

### COMPETENT PERSON DESIGNATION

The following individual(s) has been designated as a "Competent Person," meaning one who is capable of identifying existing and predictable hazards in the surroundings or working conditions which are unsanitary, hazardous, or dangerous to employees, and who is hereby authorized by Envirocon to take prompt corrective measures to eliminate them.

The person(s) named below has knowledge of the systems, equipment, conditions and procedures in relationship to the proper use, inspection, manufacturers' recommendations and instructions, and maintenance as designated below. This person(s) has been delegated the responsibility to coordinate all activities and operations as defined by the designation(s). In carrying out these responsibilities, it shall be the duty of the competent person to act within the limits of their knowledge and training.

NAME/DESIGNATION(S)	COMPANY	COMPETENT PERSON			
Rick Rogers	Envirocon	<b>⊠</b> Excavation			
Acknowledgment:					
Signature		_ Date	<del></del>		
Competent Person					
Brian Vibbert	Envirocon	<b>■</b> Excavation	⊠Site Safety		
Acknowledgment:					
Signature		Date			
Competent Person					
Doug Tisdell	Envirocon	⊠Site Safety	Excavation,		
Acknowledgment:					
Signature		Date			
Competent Person		·			
		-			

### D. SITE SECURITY AND CONTROLS

This section deals with site access and general project rules, and the controls related to waste management and access to contaminated areas to ensure qualifications of personnel.

### D.1.a. Public Safety

The work area shall be suitably delineated (i.e., as appropriate for a construction site) in order to prevent unauthorized entry. Envirocon visitors shall be directed to the project manager's designated representative to seek authorization when appropriate. Visitors shall be signed in at the administrative office of Envirocon or other location as directed. Visitors that are not qualified for work in the EZ shall be escorted or otherwise prevented from accidentally entering the EZ.

All unattended equipment will be secured physically and mechanically during periods of non-use.

## D.2. Project Rules

The project rules have been developed by BNSF and Envirocon in order to create a problem-free and rewarding work environment, one in which the employee understands what is expected of them on the project site. An employee who fails to maintain at all times the proper standards of conduct or who violates any of the following rules and regulations may be subject to disciplinary action, including but not limited to, termination of employment or denial of access.

## D.2.a. Unacceptable Conduct

Unacceptable employee conduct and/or violation of a project rule or requirement may be reason for disciplinary action up to and including suspension without pay, termination of employment, or denial of access to the work area or client facilities. Examples of unacceptable employee conduct and/or rule violation are as follows:

- o Possessing, when not authorized project, or other person's property or services, or theft of the same.
- o Altering, damaging, or mutilating project, or other person's property.
- Violating the Security Rules.
- o Making or stating false claims or falsifying reports or records.
- o Refusing to submit to a search.
- o Refusing to submit to drug and alcohol screening or testing or other similar inspections.
- o Possessing or using alcoholic beverages, controlled substances, or weapons on any project.
- o Using or possessing keys or other devices used for lock opening without specific permission.
- o Failure or refusal to perform assigned work as directed.
- Fighting.

- o Negligence resulting in an infraction of health and safety or project rules or requirements.
- o Taking unauthorized work breaks.
- o Engaging in horseplay of any kind.
- o Not using trash receptacles or otherwise creating unsanitary conditions.
- o Smoking, using tobacco, or eating in prohibited areas.
- o Violating health and safety or project rules or requirements.
- Sexual harassment.
- o Not reporting use of prescription drugs.
- o Not reporting equipment or material damage.
- Not reporting an accident or incident.
- o Displaying pomographic, sexually explicit or otherwise offensive photographs, calendars, or other materials that may be objectionable to other individuals or groups.

### D.2.b. Discipline

Envirocon reserve the right to take disciplinary action at its discretion up to and including suspension or termination of employment or denial of access to the site work areas, depending on the severity of the violation.

#### D.2.c. Subcontractors

Subcontractors shall also adhere to established policies and procedures applicable to this project site.

Subcontractors are responsible for disciplinary actions regarding their own employees and their lower tier subcontractors.

Failure of subcontractor employees to adhere to policies and procedures as described in this document will result in verbal or written warnings to the responsible subcontractor.

Envirocon reserves the right to permanently or temporarily remove and bar subcontractor employees from the project site. Unacceptable conduct or failure to adhere to established policies and procedures willfully or repeatedly may result in such removal from the project site.

#### D.3. Communications

Site communications for this project will follow the following communications protocols: Each employee while in exclusion areas:

Primary means is by visual communication with a buddy.

Alternate communication is by radio.

Envirocon shall furnish and post asbestos warning signs conforming to the requirements of 40 CFR 61.154 and 29 CFR 1910.1 45(d)(4) on perimeter fence. Warning signs shall be posted at the entrances and at intervals not to exceed 100 meters (328 feet) at the site exclusion zone fence and disposal facility fence. Post an approximately 20 inch by 14 inch manufactured caution sign at each entrance to the work area displaying the following legend with letter sizes and styles of a visibility required by 29 CFR 1926:

**LEGEND** 

DANGER

**ASBESTOS** 

## CANCER AND LUNG DISEASE HAZARD

# RESPIRATORS AND PROTECTIVE CLOTHING ARE REQUIRED IN THIS AREA

Provide spacing between respective lines at least equal to the height of the respective upper line.

Post an approximately 10 inch by 14 inch manufactured sign at each entrance to each work area displaying the following legend with letter sizes and styles of a visibility at least equal to the following:

**LEGEND** 

NOTATION

No Food, Beverages or Tobacco Permitted

3/4" Block

All Persons Shall Don Protective

3/4" Block

Clothing (Coverings) Before~

Entering the Work Area

All Persons Shall Shower Immediately After Leaving Work Area and Before

3/4" Block.

Entering the Changing Area

Standard Hand Directing Signals (Placing Materials)

Stop: Left or right hand in a fist pointing upwards.

Emergency Stop: Both hands in a fist pointing upwards.

Set brake, reduce engine to idle speed and remove hands from wheel: Both hands open and fingers spread, palms forward pointing up. (This should appear to be a motion like a driver lifting hands off of the wheel.)

Hold your position and open dump gate: Both hands in a fist with thumbs up.

Move cautiously straight forward or backward: Either hand pointing upward, palms facing in the motion of travel, swinging forward and backward. (This signal should produce a gesture of hands waving someone forward or pushing back. Use the fingers only to indicate an even slower or smaller amount.)

You are clear to raise your bed: Hold one hand in a fist to indicate stop (i.e., hold your position) and use the other hand to point index finger into the air.

You are clear to lower your bed: Hold one hand in a fist to indicate stop (i.e., hold your position) and use the other hand to point index finger downward.

**Emergency Hand Signals:** 

Hands waving above head: Attention getter.

Hands motioning from front to back overhead: "Follow me immediately... evacuating the area."

Grip on a partner's wrist or placement of both hands around a partner's waist: "Leave the area immediately, no debate."

Hands on top of head: "Need assistance."

Thumbs up: "Okay, I'm all right, I understand."

Thumbs down: "No, negative."

Audible Emergency Signals

Site evacuation notification:

- The signal is a continuous horn blast from air horns or truck horns.
- Unless otherwise directed, all personnel will leave the Exclusion Zone and head for the predesignated assembly point (see emergency procedures).

#### D.4. Site Access

Access to the site shall be limited to those personnel that are qualified and have an acceptable (in the judgement of the client facility's designated representatives and the Envirocon security manager) reason for being on site. Continuing access is further conditioned on adherence to the established site policies and procedures.

#### D.4.a. Contamination Control Boundaries

The site safety officer is responsible for establishing and maintaining contamination control boundaries and supervising decontamination. Envirocon shall erect temporary fencing to establish an exclusion zone, contamination reduction zone, and support zone.

Work Areas. The work area, for purposes of this project, is that area defined by hazardous waste and supporting operations. The work area is that area that is regulated by 29 CFR 1910.120 and/or 1926.65.

Exclusion Zone (EZ). The EZ is that part of the work area where, at a given time, workers may potentially come in contact with contaminated materials. This contact is generally defined as inhalation of airborne levels exceeding task-specific action limits or 50% of established exposure limits (OSHA or ACGIH). Contact also includes any ingestion, skin contact, injection, or other contact route of exposure to materials exceeding EPA or other established levels of contamination for the site. All disturbances of contaminated media will occur within the exclusion zone.

Contamination Reduction Zone (CRZ). The CRZ is that part of the work area between the EZ and support areas where contamination from the EZ is controlled in such a way as to remove the potential for contaminating support areas. Waste loading will be permitted in the contamination reduction zone.

Support Area. The support area is that part of the work area where supporting tasks are conducted, and where the potential for exposure to contaminants has been fully controlled (i.e., personnel are not exposed to potential contact with contaminants).

#### Boundaries

Boundaries are established by the site safety and health officer based on the definitions above as compared to actual site conditions as monitored. Boundaries are flexible and should reflect current site conditions.

Boundaries to be marked with suitable barriers (e.g., yellow banner guard, brightly colored rope, barricades, or orange snow fence) to clearly establish the specified areas and the applicable regulations for that area. If rope is used, pennants should be tied to the rope to help increase the visibility to foot and vehicle traffic and to provide a suitable warning.

#### D.5. Decontamination

The site safety officer is responsible for establishing and supervising decontamination on site. The following procedures are intended to establish guidelines for this purpose. As work progresses control zones may be altered. It is essential that the safety officer adjust this process as necessary to ensure that:

- o personnel and equipment leave the site free of contamination, and
- o contamination is not spread to other areas on site.

## D.5.a. Contamination Reduction Zone(s) (CRZ)

Contamination Reduction Zone(s) are those areas established for the purpose of transition between an EZ and adjoining areas. CRZs should be established for personnel and/or equipment to decontaminate during exit from an EZ into:

- o clean support areas, and/or
- o an adjoining EZ with different or lesser contamination.
- o Envirocon shall furnish separate personnel and equipment decontamination facilities within the contamination reduction zone. Decontamination facilities system shall be placed and operating prior to initiation of clearing and waste excavation.

## D.5.b. Frequency

All equipment will be inspected and be adequately decontaminated to avoid cross-contamination when moving out of an EZ.

All equipment will be decontaminated for site release before leaving the site.

All personnel will be decontaminated before leaving a designated EZ.

### D.5.c. Personnel Decontamination Procedures

### **Entering Contaminated Area through Support Zone:**

- o Pick up clean PPE and boots.
- o All donning of clothing and equipment, taping, etc. is done here.
- Equipment contaminated from the preceding day is to be picked up in the contamination control area.

#### CRZ:

- o Prior to entering this area, be sure that all personnel protective equipment is in good working condition.
- Conduct final inspection of PPE ensemble.

## **Exiting Exclusion Zone**

- o Personnel and equipment leaving the Exclusion Zone shall be thoroughly decontaminated.
- o The following protocols shall be used for the decontamination stations according to the level of protection as follows. Where a step involves an article that is not prescribed, skip the step.

Disposable PPE (or other lightly contaminated solid materials) will be placed in a sealable container affixed with a legible description of contents (and origin, date, responsible party, and phone number) for disposal in an appropriate landfill. Such a container will be a minimum of two layers of 6 mil. poly of substantial enough construction to sustain repeated lifting/carrying by hand or light mechanical conveyance without damage to seams, sealing mechanism or rupture due to contents.

	EMEL C
1	equipment drop
2	outer boot rinse
3	outer boot removal
4	outer glove removal
5	remove hard-hat
в	coverall removal
7	remove inner gloves
8	shower
9	remove respirator (in shower)
10	rinse respirator
11	hand dry and bag respirator
12	change to street clothing

## D.5.d. Emergency Decon – Evacuation to CRZ or Immobilized Victims

This procedure applies to non-exit decontamination. Examples of the circumstances for these emergencies include the following. Emergency decon procedures are intended to be a guideline. Depending on the nature of the actual emergency, response personnel and evacuees will ultimately be responsible for weighing the risks of the emergency against the risk of incomplete decontamination.

## EZ Evacuation to the CRZ.

In this case employees are evacuating the EZ due to a release or emergency limited to the EZ that requires all or most of the employees to retreat to the CRZ.

The main objective in this case is to perform the minimum decon necessary to prevent gross contamination of the CRZ while sheltering employees.

## Immobile Victims are Prepared for Medical Evacuation Inside the EZ.

In these cases, immobile victims will be decontaminated (to the degree this can be safely accomplished) in preparation for rescue personnel to remove them on a litter or backboard.

- o Gently wash and rinse outer garments to the extent this can be safely accomplished.
- O Lay down clean tarps, trash bags or other soil barriers for EMTs and their equipment.
- O If possible, place the victims on clean barriers or lay barriers as close as possible to the victims.
- o Bring similar clean materials to the CRZ for placing in the ambulance or evacuation vehicle.

Bring clean potable water and a first aid kit to the victim for cleaning wounds.

## D.5.e. Emergency Decon – Evacuation to Support Areas or Mobile Victims

This procedure applies to circumstances requiring exit decontamination. Emergency decon procedures are intended to be a guideline. Depending on the nature of the actual emergency, response personnel and evacuees will ultimately be responsible for weighing the risks of the emergency against the risk of incomplete decontamination. Examples of the circumstances for these emergencies include the following.

### EZ Evacuation to Support Zone areas.

In this case employees are evacuating the EZ beyond the CRZ.

The main objective in this case is to shed contaminated materials quickly (with the idea that discarded articles can be decontaminated later when the emergency is over).

## Mobile victims will be expeditiously evacuated from the area for medical treatment in support areas.

In these cases, immobile victims will be decontaminated (to the degree this can be safely and expeditiously accomplished).

EMTs and medical facilities must be advised that the employee may still have some contamination.

## D.5.f. Equipment Decontamination

Equipment decontamination for release from the site will be performed on the facility de-con pad.

Prior to exiting an EZ, the equipment operator will ensure that the equipment is inspected for visible gross contamination. Visible gross contamination will be removed using shovels and hand equipment as necessary to prevent cross-contamination of the site. Pressurized water will be used to perform the detail decontamination.

Before release from the site, all contaminated equipment will be thoroughly decontaminated at the equipment de-con area using wet methods and HEPA vacuum to remove visible contamination.

o If material is judged as un-cleanable it will not be used outside the Contamination Zone and will be disposed of at the end of its usefulness.

## D.5.g. Small Equipment Procedure

Surface debris and dirt will be removed from small equipment and tools with vigorous wet brushing and wiping.

## D.5.h. Disposition of Decontamination Wastes

All equipment and solvents used for decontamination shall be decontaminated or disposed of with the established waste streams as described in the waste management plan.

## D.6. Reporting Incidents

All incidents must be reported in accordance with the project Health and Safety Plan (HASP) and Envirocon procedures.

The on-site supervisor is responsible for ensuring that the Hazardous Waste Manager is informed of any spills.

This includes, but is not limited to, the following:

- o accidents (with or without damages),
- o finding unusual materials or soil conditions (e.g., previously disturbed soils, materials with unusual odors, materials with unusual coloration, etc.);
- spills of remediation waste; or
- o spills of lubricants, coolants, fuels, or any other hazardous materials.

#### D.7. Emissions Controls

#### **Dust and Airborne Fiber Controls**

Dust and airborne fiber levels will be monitored on site in accordance with the HASP monitoring requirements for protection of personnel. Recognized limits for this monitoring include the Department of Labor (OSHA) Permissible Exposure Limits (PEL) and/or the American Conference of Governmental Industrial Hygienists (ACGIH) Threshold Limit Values (TLV).

Perimeter fiber levels will be monitored by EMR to ensure contaminants do not leave the EZ.

Exceedance shall be controlled by a combination of the following:

- o changing control zone boundaries
- upgrading respiratory protection control
- o slowing or suspending intrusive work
- o application of water

## D.7.a. Spill Response and Prevention

Spill prevention controls and response procedures are documented in the emergency response procedures of this Health and Safety Plan.

#### D.7.b. Waste Minimization

Waste generated on site will be minimized by proper sampling and categorization of waste streams.

Waste generated on site will be minimized by protecting segregated wastes from wind, weather and runoff.

## D.8. Qualifications and Access Requirements

Access to project sites is conditioned upon maintaining qualifications with regard to training, medical monitoring, drug & alcohol testing, adherence to required procedures, and related requirements. Failure to maintain these qualifications may result in removal from site and/or termination of employment.

All onsite workers involved in or working onsite during intrusive activities that will disturb soils or waste must have completed the OSHA 40-hour HAZWOPER training and annual updates and must have a minimum of 32 hours of asbestos training and 16 hours of site-specific training.

## D.8.a. Training Qualifications Summary

Table D.8.a summarizes the training qualifications for this project.

	40 Hour Training	8 hr annual refresher	8 Hr Super- visor	BNSF Safety Training	Project HASP and Site Training	Applicable AHAs	Daily Safety Briefings	Respiratory Protection Training	AHERA 40/32 hour Training	Asbestos Awareness
Supervisors	Х	X	X	X	X	A	Х	X	Х	
Level C (i.e., with potential use of respirators)	X	х		X	х	A	x	х	х	
Work outside of EZ (e.g., office staff)				X	Х	A	x			
Managers entering EZ to observe only	Х	х		Х	х	х	Х	х		Х
Truck Drivers	Х	Х		Х	Х	Α			Х	
Delivery personnel outside of EZ					<b>E</b>					

A = Information as applicable to hazards and tasks on site.

O = Site HSO will determine whether a 32-hour HAZWOPER course will suffice

- All personnel performing work on this project will receive a briefing on this HASP. This training shall include the following:
  - Names of personnel and alternates responsible for safety and health.
  - o Safety, health and other hazards present on site and off site.
  - o Use of personal protective equipment.
  - Site Safety Practices/Standard Operating Procedures
  - o Work practices by which the employee can minimize risks from hazards.
  - o Safe use of engineering controls and equipment on the site.

- o Medical surveillance techniques, and recognition of symptoms and signs that might indicate overexposure to hazards.
- o An emergency action plan meeting the requirements for safe and effective responses to emergencies, including all necessary equipment.
- o spill containment program.
- o Decontamination procedures.
- o Proper use of field equipment.
- o Employees rights and responsibilities.
- Employees shall be briefed on applicable AHAs.
- This training must be acknowledged on the sign-up sheets at the front of this plan.
- Worker Acknowledgement of asbestos training will be signed by employees on form in Appendix G.
- Personnel entering the exclusion zone shall have a minimum of 40 hours of HAZWOPER training in accordance with 29 CFR 1910.120 or 1926.65. This includes an additional three days of On-the-Job Training (OJT) which must be documented.
- Personnel required to wear respiratory protection will have a minimum of 40 hours of HAZWOPER training and appropriate asbestos training, to include respiratory protection training.
- Supervisors will have an additional 8 hours of supervisory training for work in the EZ.
- Personnel required to have HAZWOPER training must be up to date on annual 8 hour refresher training.
- Personnel performing support functions (i.e., work outside of the EZ or CRZ) are not required to have HAZWOPER training but shall be briefed on this HASP and have completed BNSF Safety Training.
- Personnel will be provided specialized training to qualify them as a "competent person", as for example
  for excavations, confined space entry, and other useages under the OSHA standards.

## D.8.b. Meetings

In order to maintain qualifications, it is necessary to have regular meetings in order to enhance planning efforts and to pass information from lessons learned or changes in procedures.

## **Daily Safety Meetings**

A daily "tailgate" safety meeting will be held before starting work. Safety meetings will also be held when site conditions change, before starting new activities, and after incidents.

These daily meeting shall be used to keep personnel up to date on changes in plans and procedures since their initial training and also to ensure coordinated work assignments by outlining the day's activities and job assignments.

Daily "tailgate" safety meeting attendance is mandatory for all site personnel including lower tier subcontractors; personnel not in attendance must review topics discussed prior to entry.

Meetings will also be used to discuss:

- o Topics of interest or concern of the crew.
- Suspected hazards for that day's work and what precautions are necessary to deal with these hazards.
- Necessary training requirements and site work rules.
- o Changes in work practices or environmental conditions.
- o Precautions or safe work practices related to the day's site activities.
- o New or modified site-wide procedures or requirements.

Documentation of daily safety meetings shall be maintained and made available for inspection..

Daily safety meetings shall be used as a time for personnel to make safety suggestions. Suggestions shall be noted in the minutes and evaluated by supervisory and safety personnel. Actions taken on suggestions should be noted on the daily safety meeting form.

## D.8.c. Medical Qualifications Summary

The following medical qualifications are required to perform work in certain areas.

TEST COMPONENT (1)	Level D (1)	Level C Exclusion Zone (1)	Asbestos worker	Support Zone Workers (1)	Envirocon New Hires (1)(5)	Post-Accident/ exposure (1)	End of Project (1)(2)
Occupational History/update	Х	Х	Х	(5)	х		(6)
Audiometric Exam	Х	Х	Х		Х		
Manuel lifting protocol	х	х	х		х		
Drug testing(1)		,			(5)	(4)X	
Fitness to return to work (after work/non-work retated injuries or illness).				,	·	х	
Fitness for Hazardous Waste Work (29 CFR 1910.120) including liver functions		x				(1)	(6)
Fitness to wear respirators (29 CFR 1910,134)		(3)	х		(3)		
Asbestos protocol (7)		х	х				

TEST COMPONENT (1)	Level D (1)	Level C Exclusion Zone (1)	Asbestos worker	Support Zone Workers (1)	Envirocon New Hires (1)(5)	Post-Accident/ exposure (1)	End of Project (1)(2)
Basic Fitness For Duty (Level D. Construction, or non-HAZWOPER)	x	х		(5)	(5)	_	Х

#### NOTES:

- (1) WorkCare provides medical monitoring for all Envirocon employees through local health care facilities. The appropriate protocol will be scheduled by an authorized Envirocon representative and should never by scheduled by the employee (except in the case of a medical emergency). Lower tier subcontractors and guest are required to produce their own protocols equivalent to those indicated and/or in accordance with the referenced regulatory requirements. Employee may be required at any scheduled exam, examinations conducted after accidents, randomly, or as part of facility procedures to donate specimens for drug and alcohol testing. Failure to conform to medical monitoring requirements, drug & alcohol, or other related requirements may be grounds for removal from site and termination of employment.
- (2) This column refers to certain task-specific protocols. It IS NOT A TERMINATION OF EMPLOYMENT EXAM requirement. All Envirocon employees should be notified of potential eligibility for termination exams when they are terminated from employment. If they request such an exam, the Director of Health and Safety will review the request and determine eligibility under the Envirocon Medical Monitoring Program in accordance with 29 CFR 1910.120.
- (3) Must be completed prior to wearing respiratory protection
- (4) As determined by Envirocon policy and the Director of Health and Safety accidents, incidents, injuries, or illnesses involving medical evaluations, potential OSHA recordability, potential property damages in excess of \$500, involving damages or injuries to parties not affiliated with Envirocon shall be evaluated.
- (5) New employees are hired provisionally based on their ability to pass the fitness for duty examination. Workcare makes the final determination regarding fitness for duty for Envirocon Employees (this includes all aspects of fitness for duty and drug testing results). New hires may begin Level-D work (i.e., this evaluation does not authorize work where exposures may exceed the action levels for chemical exposures) with the basic fitness for duty evaluation provided by the attending or examining physician. The examining or attending physician's evaluation is considered temporary (not to exceed 30 days) until final evaluation by Workcare's final evaluation.
- (6) Employees that will be terminated at the end of the project and have not had a HAZWOPER physical within the last six months shall be offered a termination examination.
- (7) Workers who for a combined total of 30 or more days per year are engaged in Asbestos Class II work per 29 CFR 1910.1101

#### E. HAZARDS

This safety and health program includes orderly processes for recognizing and evaluating hazards. Hazard identification and evaluation must be a continuing process although the focal point is the planning phases of tasks.

### E.1. Accident Prevention Program

Envirocon's Health and Safety Program Manual serves as the primary accident prevention program document. This HASP further develops the task-specific procedures to prevent accidents at the site. Beyond these documents, the accident prevention program is an ongoing process which involves the participation of all personnel through hazard identification, hazard analysis and hazard control. Refer to Envirocon's Health and Safety Program Procedure 14 "Correcting Unsafe Conditions and Work Practices."

### E.1.a. Elements of the Accident Prevention Program

The accident prevention process at this site includes a number of ways to identify hazards and develop appropriate controls. They include the following programs and procedures.

<u>Proper planning</u>. There are a number of planning process which take place prior to execution of a given task. Based on many other plans and programs, Envirocon and the client have developed a HASP for the site.

Activity Hazard Analysis (AHA). The planning and hazard assessment process continues into the individual job task through the use of AHA. AHAs shall be developed for all significant work tasks associated with this project. New tasks, or previously undeveloped hazards require a new AHA or redraft existing ones. AHAs are primarily a planning phase tool. As needed, this HASP may be modified in order to accommodate control requirements identified through the AHA process.

AHA's prepared as a part of this HASP (Appendix E) and their status is described in the following chart:

АНА#	Title
1	Mobilization
2	Heavy Equipment
3	Rail Removal / Rail Tie Washing Activities
4	Excavation
5_	Decontamination
6	Hauling

Work place inspections. All supervisory personnel, safety officers, and competent persons shall conduct site inspections. Site inspections are intended to ensure that established plans and procedures are followed, changes in conditions are identified, effectiveness of controls are assessed, and new hazards identified.

<u>Employee involvement</u>. The active involvement of every employee is encouraged through the site incentives program, "time out for safety" authority, safety observer program, and daily safety briefings. Employee involvement is the cornerstone of the ZIP goal. This goal will not be met (and has no real meaning) without every employee's complete focus at all times on every task. Additionally, every employee is required to look out for their coworkers when their focus falters.

<u>Incident investigations</u>. Employees are required to immediately report all incidents in order to ensure a timely investigation. Incident investigation is aggressive at site in order to capture lessons learned from minor incidents and correct controls before significant accidents occur.

## E.1.b. Responsibilities

**Supervisors**, assisted by safety and health personnel are responsible for implementing effective accident prevention processes. This includes:

- o conducting required planning,
- o conducting required inspections,
- o aggressively investigating all incidents,
- o encouraging employee participation, and
- o taking a leadership role in achieving ZIP.

## Employees are responsible for:

- o following established procedures,
- o actively participating in training processes,
- o reporting all incidents immediately to their supervisors,
- o positively assisting in investigations of incidents, and
- o looking out for their coworkers (i.e., "buddies").

#### E.2. Potential Waste Hazards

Historical activities at the site and surrounding areas have resulted in extensive areas of soil contamination. The primary contaminants of concern are Libby Amphibole and visually identified hydrated biotite. The Response action is based on analytical data from 2001 through 2004, and visual mapping of hydrated biotite that was mapped in October 2001.

### E.3. Chemicals Brought on Site

Envirocon anticipates bringing to the site chemicals with recognized hazards. Only quantities necessary for the performing of project tasks will be brought. All chemicals will be used in accordance with manufacturer's recommendations and the manufacturer's MSDS will be kept at the site. Each employee will be trained to the requirements of 29 CFR 1910.1200 in understanding the hazards, means of protection, clean-up protocols and other use and handling information of chemicals on site.

Envirocon anticipates bringing the following chemicals to the site:

- Conventional motor fuels, greases, lubricants and antifreeze
- Cleaning products

### F. INDUSTRIAL HYGIENE PROGRAM CONTROLS

OSHA mandates programmatic controls for many hazards. This section describes the programs in place to control safety and health hazards on site.

## F.1. Perimeter Site Monitoring and Sampling

Perimeter site monitoring will be performed by EMR in accordance the sampling and analyses plan provided in the contract documents. No visible dust shall be permitted to leave the exclusion zone boundary, and dust monitoring is not deemed necessary due to the wet method dust/fiber suppression engineering controls to be used during intrusive excavation activities.

### F.2. Personal Monitoring

Personal monitoring will be provided by EMR in accordance the sampling and analyses plan provided in the contract documents. Analytical results will be provided and posted by EMR to maintain compliance with applicable OSHA standards.

### F.3. Personal Protective Equipment

PPE shall be selected, used, maintained and stored in accordance with 29 CFR 1910 Subpart I. Engineering, administrative, and/or work practice controls shall be implemented where feasible, rather than relying exclusively on PPE for hazard control.

#### F.3.a. Selection and Use

Selection and use of PPE shall be based on the chemical and physical hazards associated with site contamination and the potential safety hazards associated with the work being performed. Envirocon shall maintain an adequate selection of PPE to allow working with wastes from the site. Standard PPE for contamination prevention, except for respirators, will be supplied by Envirocon for Envirocon employees.

PPE requirements will be determined by the Health and Safety Supervisor based on the latest information and monitoring results.

## Maintenance and Storage

PPE (including respirators) shall be maintained and stored in a central location. Envirocon will ensure that adequate facilities for cleaning, maintenance, storage and issue are made available. Maintenance of PPE and respiratory protection shall be completed in accordance with manufacturer's instructions. Specific functions to be carried out may include:

- o Storing and issuing PPE
- Maintaining and inspecting all PPE and respiratory protection
- o Cleaning reusable PPE
- o Disposing of used PPE

## F.3.b. Summary of Basic PPE Requirements

	(able For			100 000	
Activity	Head/Face	Foot (8)	Hands (10)	Respirator	Clothing_
General site labor, non-intrusive support zone tasks	Hard hat(2),     safety glasses(2)	Steel toed boots	Leather gloves as needed.	none (1)	Shirt w/sleeves     Long pants     high visibility vest (5)
Supervision of support zone work.	<ul><li>Hard hat(2),</li><li>safety glasses(2)</li></ul>	Steel toed boots	As needed.	None. (1)	Shirt w/sleeves     Long pants     high visibility vest (5)
Decon (contaminated) soils ) Soils intrusive activites	Hard hat(2), Safety glasses(2)	Boots w/steel toes, (4) Boot covers	Leather outer gloves, nitrile or equal inner glove	Level C PAPR/APR respirator with HEPA cartridge(s)	Tyvek coveralls w/hoods taped at wrists and ankles(3)  Orange vest, (high vis ) (5)
Drivers	<ul> <li>Hard hat outside cab (2),</li> <li>Safety glasses(2)</li> </ul>	Boots w/steel toes, (4)	As needed.	None. (if inside positive pressure cab)	<ul><li>Long pants</li><li>Shirts with sleeves</li></ul>

	Table Fig. (	Surviva.	y SESTANCE	ya PPE	
Activity	Head/Face	Foot (8)	Hands (10)	Respirator	Clothing

- (1) Voluntary use of respirators is authorized for muisance dusts and exposures known to be below PEL levels. For muisance dust use disposable N, R or P 95 or better (dispose of N or R types daily and P type weekly) For odors use half mask with OV or OV/P95 or better (change at start of week)
- (2) Hard hats and safety glasses are not required inside of enclosed cabs with windshields; or when working outside of the contaminated areas performing non-labor tasks such as walking to and from buildings/trailers, typing, or making notes.
- (3) Dust resistant outer coveralls such as Tyveks with "scrubs" underneath will meet this requirement. These are not allowed for use with hazardous materials.
- (4) Boot covers are a durable covering capable of resisting dust penetration which would contaminate steel toed boots.
- (5) High visibility vests are required for activities on BNSF properties.
- (6) When working with wet contaminated materials, a PVC or other equivalent water resistant outer boot covering will be used to prevent contamination of steel toed boots. Under conditions with launderable coveralls are penetrated by wet conditions they shall be similarly substituted or covered with a suitable outer water proof layer.
- (7) For purposes of preventing heat or cold stress, decon ensembles may not be torn, or worn open.
- (8) EZ wet work and decon must use a PVC steel-toed boot, or a "Fireman's overboot" but not a leather boot with cover (except for truck drivers).
- (9) Inner suit of comfort/modesty clothing (e.g., launderable hospital scrubs).
- (10) Hand protection may have two components; as a physical protector against cut/abrasions etc., and as a barrier against chemical contact. Combinations to meet these requirements should be approved through the site safety officer depending on the task, contaminants and other relevant considerations.

#### F.3.c. PPE Rules

All personnel are required to use the personal protection specified for their work. This may include, but is not limited to cartridge respirator, protective suit, gloves, boots, hard hat, hearing protection, safety vest and safety glasses.

All respirator use will be in accordance with Envirocon's Respiratory Protection Program and/or task-specific procedures.

### Safety Boots/Shoes

- O Safety steel-toed boots/shoes that meet the requirements and specifications of ANSI Z41.1 shall be worn while working in field locations.
- Boots/shoes must be in good repair and laced or fastened. Sandals and tennis-style shoes
  of any type shall not be worn while working.

### Safety / Hard Hats

Approved safety hats that meet requirements and specifications established in ANSI Z89.1 shall be worn at all times in the field or construction zone/yard removal locations.

Safety hats are not required to be worn in vehicles (passenger cars or trucks)or offices. Safety hats are not required in construction equipment with enclosed cabs. Safety hats must be worn in all construction equipment (loaders, bobcats, excavators, dump trucks, backhoes, etc.) that do not have enclosed cabs.

## Eye Protection

As a minimum, ANSI-approved safety glasses with side shields will be worn at all times when working on this site.

ANSI-approved safety glasses must be worn by an equipment operator unless the cab is a full enclosure with windows closed.

Proper eye protection (goggles, safety glasses, etc.) must be worn when working with (or in the proximate exposure area of) recognized hazards to the eyes such as wire brushing, hammering, buffing, chipping, grinding, welding, cutting wire rope, working on rust, dirty chains, cables, or handling chemicals. If the job might result in eye injury, then eye protection is required.

Selection of shading for brazing, cutting and welding filter lenses will be based on 29 CFR 1910.133. Shading of PPE lenses to protect against bright, ultra-violet or infra-red light may reduce visibility in normal light. Workers must remove tinted lenses when performing work or moving around in work areas when tinting is not required.

Protective measures (for personnel potentially within range of an activity that may generate projectiles or damaging radiation) may include physical shields, or tarps or relocation beyond range for the duration of the activity.

Goggles or transparent full-face shields must always be worn when grinding.

Envirocon may not provide prescription safety glasses, however, Envirocon will provide safety glasses capable of fitting over prescription glasses and manufacturer inserts for respirator corrective eyewear.

## **Hearing Protection**

Approved earplugs or earmuffs must be wom in areas of high noise levels.

High noise level is defined as areas where noise levels exceed, or may exceed, 90 dBA. A noise survey will conducted at each work station where a noise exposure level is anticipated to reach 85 dBA.

## Safety Vests

Orange safety vests are required anytime Envirocon personnel are working on BNSF project sites or around operating equipment. This requirement applies to equipment operators whose duties involve them leaving the cab of their equipment and working in general area.

### Clothing

Sleeved shirts must be worn on the job. Tank tops will not be allowed. Long pants shall be worn, Pants shall cover the work boot top. Shorts will only be allowed if they are worn under cotton coveralls or other protective clothing. Loose or ragged clothing shall not be worn.

All personnel are responsible to clean and maintain the protective equipment issued to them. Any noted defects in the equipment shall immediately be reported to the Envirocon Project Manager or the site superintendent, as appropriate.

## F.4. Site-Specific Respiratory Protection

### F.4.a. Documents

Envirocon's written Respiratory Protection Program is contained in Procedure 1403:016. This health and safety plan procedure serves as the task-specific procedure for the use of respirators on this project.

#### F.4.b. Administration

The Respiratory Protection Program Administrator is Joe Ocken, CIH.

The designated site safety supervisor for this project will serve as assistant program administrator.

Medical qualification procedures are evaluated and implemented by WorkCare, Drs. Greaney and Chan.

## F.4.c. Respiratory Protection Program Objectives

Objectives of the respiratory protection program are as follows:

- o Use engineering controls, and procedures to minimize the potential for exposure, and if they are not feasible, or not effective, respiratory equipment will be used.
- o Make available to employees the appropriate Respiratory Protection Policy describing the issuance, cleaning, inspection, and storage of respirators.
- o Ensure that respirators are inspected, maintained, sanitized, and appropriately stored.

## F.4.d. Continuing Respirator Effectiveness

The assistant administrator (site safety officer) is responsible for conducting daily site inspections, including special inspections described in the inspections section of this procedure.

Daily site inspections shall include surveillance of work place conditions. In particular the following conditions shall be assessed.

- o potential changes in contaminant concentration,
- o changes in employee exposure or stress; and

respirator effectiveness.

## F.4.e. Respiratory Training Objectives

Specific respiratory protection training will be provided by Envirocon for employees and subcontractors who will be required to wear respirators as part of their normal job function. Respiratory Protection training will include but not be limited to:

- Proper use of respirators
- o Limitations of respirators
- o Emergency procedures
- o Donning and doffing
- Maintenance of respirators

## F.4.f. Training

Envirocon Respiratory Protection Training Procedures include the following:

- o Employees may be trained using the Envirocon Respiratory Protection Program lesson plan.
- o 40 hr HAZWOPER Training. Employees may be trained in a recent 40 hour or Emergency Response training courses (within the last year), or a recent 8 hour refresher training course which covers the use of respiratory protection (within the last year).
- o Respirator wearers may also be trained by certified training using a lesson plan covering the new (1998) revised respiratory protection program standard.
- o OSHA training (for example Hazard Communication, Respiratory Protection, Hearing Conservation etc.) that is provided in an 8-hour HAZWOPER refresher will be documented and placed in each employee's training/medical file.

## F.4.g. Voluntary Use of Respirators

The voluntary use of respirators by employees (e.g., for control of odors or nuisance dusts) must be qualified. Voluntary use of respirators is only allowed in areas characterized as not requiring respiratory protection. The specific type of respirator and conditions of use must be approved by the Director of Health and Safety. Voluntary use of respirators must otherwise be in accordance with this procedure.

Employees voluntarily using respirators must be trained in the information provided in Appendix D to Sec. 1910.134 "Information for Employees Using Respirators When Not Required Under the Standard." Voluntary use of disposable nuisance dust masks does not require medical evaluation. Voluntary use of these masks does not require a fit test.

#### F.4.h. Medical Qualifications.

Respirator wearer's shall be medically evaluated by a company designated physician or other licensed health care professional (PLHCP).

Envirocon's PLHCP is Drs. Greaney and Chan of Workcare.

Dr. Greaney will be assisted in these duties by a local PLHCP. Local PLHCPs will also be licensed physicians. Fitness to wear respiratory protection will be determined by the local PLHCP and reviewed by Dr. Greaney.

## F.4.i. Fit Testing

### General requirements

- o Before an employee uses any respirator with a negative or positive pressure tight-fitting facepiece, the employee must be fit tested with the same make, model, style, and size of respirator that will be used.
- o Positive pressure (i.e., pressure-demand mode) supplied air respirators (SAR) or self contained breathing apparatus (SCBA) with tight-fitting facepieces are included in this requirement.
- Unless noted otherwise, fit test shall be administered using an OSHA-accepted Qualitative (QLFT) protocol.
- o Fit testing of tight-fitting atmosphere-supplying respirators and tight-fitting powered airpurifying respirators shall be accomplished by QNFT or QLFT.

## Tight-fitting atmosphere-supply & powered air-purifying respirators

Fit testing of tight-fitting atmosphere-supplying respirators and tight-fitting powered air-purifying respirators shall be accomplished by performing quantitative or qualitative fit testing in the negative pressure mode, regardless of the mode of operation (negative or positive pressure) that is used for respiratory protection.

Qualitative fit testing of these respirators shall be accomplished by temporarily converting the respirator user's actual facepiece into a negative pressure respirator with appropriate filters, or by using an identical negative pressure air-purifying respirator facepiece with the same sealing surfaces as a surrogate for the atmosphere-supplying or powered air-purifying respirator facepiece.

Quantitative fit testing of these respirators shall be accomplished by modifying the facepiece to allow sampling inside the facepiece in the breathing zone of the user, midway between the nose and mouth. This requirement shall be accomplished by installing a permanent sampling probe onto a surrogate facepiece, or by using a sampling adapter designed to temporarily provide a means of sampling air from inside the facepiece.

Any modifications to the respirator facepiece for fit testing shall be completely removed, and the facepiece restored to NIOSH-approved configuration, before that facepiece can be used in the workplace.

Envirocon fit testing will be done in accordance with the OSHA-accepted QLFT and QNFT protocols and procedures are contained in Appendix A of 29 CFR 1910.134.

## F.4.j. Fit Testing Period.

Fit test results are good for a period of one year.

If an employee using a tight-fitting facepiece respirator will be assigned a different respirator facepiece (size, style, model or make) the fit testing must be repeated.

Fit test results are voided whenever the employee, a supervisor, a safety officer, the PLHCP, or program administrator makes visual observations of, changes in the employee's physical condition that could affect respirator fit. Such conditions include, but are not limited to:

- o facial scarring,
- dental changes,
- o cosmetic surgery, or
- o an obvious change in body weight.

## F.4.k. Use of Respirators.

Employees are not allowed to use respirators with tight-fitting facepieces with:

- o facial hair that comes between the sealing surface of the facepiece and the face or that interferes with valve function; or
- o any condition that interferes with the face-to-facepiece seal or valve function.

If an employee wears corrective glasses, Envirocon will obtain the appropriate spectacle kit and have it fitted with prescription lenses. Employees are required to perform a fit check when donning all tight-fitting respirators.

## F.4.I. General Inspection and Repairs

## **Inspection requirements**

- All respirators used in routine situations shall be inspected before each use and during cleaning.
- o All respirators maintained for use in emergency situations shall be inspected at least monthly and in accordance with the manufacturer's recommendations, and shall be checked for proper function before and after each use.
- o Emergency escape-only respirators shall be inspected before being carried into the workplace for use.
- o Self-contained breathing apparatus (SCBA) shall be inspected monthly.

## Repairs

Respirators that fail an inspection or are otherwise found to be defective are removed from service, and are discarded or repaired or adjusted in accordance with these procedures:

Repairs or adjustments to respirators are to be made only by persons appropriately trained to perform such operations.

Repairs shall be made using only the respirator manufacturer's NIOSH-approved parts designed for the respirator.

Repairs shall be made according to the manufacturer's recommendations and specifications for the type and extent of repairs to be performed.

Reducing and admission valves, regulators, and alarms shall be adjusted or repaired only by the manufacturer or a technician trained by the manufacturer.

## Employees shall inspect their respirator carefully and paying particular attention to:

- o exhalation valve(s),
- o inhalation valve(s),
- o tightness of components,
- o elasticity of components,
- o look for missing components,
- o look for cracked components,
- o look for missing cartridge gaskets;
- o look for damage to cartridges (in particular the seat that seals with the cartridge gasket); and
- o ensure that all filters, cartridges and canisters used are labeled and color coded with the NIOSH approval label and that the label is not removed and remains legible.

## F.4.m. Respirator Cartridges Changes

Respirator cartridges shall be changed

- o in accordance with manufacturer's recommendations, and
- o as prescribed by this HASP or Activity Hazard Analysis (AHA).

The change-out schedule for respirator canisters/cartridges will adhere to the following logic. Combination cartridges shall follow the more conservative of criteria for particulate and organic vapors.

For any particulate filtering respirator the cartridge must be changed at least every fifth day of respirator wear, or earlier if breathing becomes difficult due to increased cartridge resistance.

If the potential organic contaminants have a boiling point > 70 °C and the concentration is less than 20 ppm, a service life (for organic vapor cartridges) will be 40 hours at a normal work rate.

If the potential organic contaminants have a boiling point > 70 °C and the concentration is less than 200 ppm, a service life will be 8 hours at a normal work rate.

Any report by an employee (using a well-fitting and properly maintained respirator) that they can detect the odor of vapors while respirator is being used on this schedule will reduce the service life for organic vapor cartridges by 20% for all wearers.

• Note: When humidity is at or above 85%, a 50% reduction in service life will be put into effect until humidity levels are again less than 85%.

## F.4.n. Cleaning and Disinfecting.

### Cleaning

Whenever respirators are doffed, employees shall wash their faces and respirator facepieces in order to prevent eye or skin imitation. Cleaning shall be accomplished by using soap and water or equivalent cleaning solutions.

### Disinfecting requirements

Respirators issued to more than one employee shall be cleaned and disinfected before being worn by different individuals.

Respirators maintained for emergency use shall be cleaned and disinfected after each use.

Respirators used in fit testing and training shall be cleaned and disinfected after each use.

Respirators used by a single individual shall be disinfected at least weekly.

### F.4.o. Storage

All respirators shall be stored to protect them from damage, contamination, dust, sunlight, extreme temperatures, excessive moisture, and damaging chemicals.

All respirators shall be packed or stored to prevent deformation of the facepiece and exhalation valve.

## Emergency respirators shall be:

- o kept accessible to the work area;
- o stored in compartments or in covers that are clearly marked as containing emergency respirators; and
- o stored in accordance with any applicable manufacturer instructions.

## F.4.p. IDLH atmospheres

Entry into an IDLH atmosphere is not permitted.

## F.4.q. Site Inspections

The site safety officer is responsible for conducting certain site inspections on a routine basis.

## Program inspections

Site inspections will be conducted daily.

The site safety officer is responsible for these inspections, including special inspections described in the inspections section of this procedure.

Daily site inspections shall include surveillance of work place conditions. In particular the following conditions shall be assessed.

- o potential changes in contaminant concentration,
- o changes in employee exposure or stress; and
- o respirator effectiveness.

#### F.5. Heat Stress

The site heat stress program shall be enforced prior during periods when the ambient temperature of 70°F. Training shall be accomplished prior to implementation.

### F.5.a. Training.

All site personnel shall be trained in the hazards and controls of heat stress prior to the onset of hot weather. Training will include identifying signs and symptoms of heat stress (e.g., muscle spasms, dizziness, lack of perspiration) in fellow workers and themselves.

#### F.5.b. Acclimatization.

Personnel become acclimatized in about 7 to 10 days (and lose acclimatization in about the same period of time). Extra attention should be given during transitional weather and to new employees that are not used to heat stressful conditions.

#### F.5.c. Fluids.

Workers shall be encouraged to increase consumption of water. Cool or cold water shall be used to enhance palatability and consumption. Electrolyte-containing beverages may also be used to encourage consumption.

#### F.5.d. Shelter.

Shelter from radiant heat (i.e., shade) shall be available for ground laborers exposed to direct sunlight (i.e., radiant heat loading) during conditions of heat stress. Shelter does not necessarily require air conditioning, and air conditioning may actually be uncomfortable for employees working in heat stressful conditions.

### F.5.e. Clothing.

Every effort should be made to minimize PPE requirements which may increase the heat stress of personnel without a commensurate gain in personal protection.

#### F.6. Cold Stress

To minimize cold related illnesses, site supervisors are to be aware of the symptoms and environmental conditions that lead to cold-related illnesses. Appropriate steps shall be taken to take to prevent their occurrence of these illnesses. This procedure describes the causes, symptoms, treatment and/or prevention of cold-related illness.

#### F.6.a. Thermal Balance.

When the temperature of the surrounding air or water are cooler than the worker, the body's physical processes must increase to maintain thermal balance.

Shivering is the body's attempt to generate increased heat.

### F.6.b. Cold Stress Symptoms.

Common (but unreliable) symptoms

Shivering, pain, and numbness, although commonly associated with cold stress, are not trustworthy indicators to cold exposures!

The reason you should not trust these is because prolonged cold exposure numbs all body sensations.

If these symptoms are detected, cold stress should be suspected.

The lack of these symptoms **DOES NOT rule out** the possibility of cold stress.

Wind-chill temperature is a better means of evaluation as it takes into account the wind's ability to strip heat from the body through convection.

Water conducts heat away from the body much faster than air. Personnel are especially exposed to a cold stress hazard when performing spill clean-up in boats or around open water in cold weather situations. Falling into cold water can rob body heat very quickly.

Clothing that is wet with perspiration (as well as from water contact) will cause heat loss through conduction.

## F.6.c. Cold Injury

#### Trench Foot.

Cause: Occurs as a result of extended exposure of the feet to cold and moisture.

Injury: Capillary walls of the feet are injured, resulting in tingling, itching and pain.

Recognition: Blisters may form followed by ulceration of the skin.

### Frost-Nip.

<u>Cause</u>: Is a localized superficial freezing of extremities such as ears, nose, toes, and fingers.

Injury: Worker experiencing frost nip are susceptible to future injury and should avoid chilling.

<u>Recognition</u>: Initially there is a dark bluish color due to bleeding under the skin which at times can become gangrenous.

#### Frostbite.

<u>Cause</u>: Frostbite occurs when the moisture in the skin actually freezes, forming ice crystals, resulting in the damage of skin cells. The ears, nose, toes and fingers are most susceptible because of poorer circulation in these areas. The body may shut down flow to the extremities in order to maintain warmth in body core areas.

<u>Injury</u>: Tissues are destroyed when bodily fluids turn to ice. Damaged area can become gangrenous resulting in the loss of tissue, finger tips and toes.

### Recognition:

- A burning pain is noted initially, then pain decreases and numbness sets in.
- o The injured area becomes red, then blue/red.
- The skin becomes waxy pale in appearance because of lack of oxygen.

## Hypothermia.

<u>Cause</u>: Occurs when heat production of the body is not sufficient to replace heat lost to the environment.

<u>Injury</u>: The core body temperature is lowered and the pulse rate slows. Metabolic processes in the body are finely tuned to perform at normal body temperature. As the temperature is lowered, muscular weakness occurs, mental abilities dull and the worker becomes uncoordinated. Cardiac arrest follows if core temperature continues to fall.

### Recognition:

- o Signs of hypothermia are evident at 95 degrees F body core temperature.
- Consciousness is lost between 89.6 86.0 degrees F.
- o At lower core temperatures, cardiac arrest is possible.
- Exposure to cold water decreases the body core temperature rapidly and consciousness is quickly lost.
- Workers on or over water should be acutely aware of the danger of immersion during cold weather.
- o Hypothermia results in dulling of senses and could result in poor decision making.

## F.6.d. Prevention

## Training and Recognition.

Prevention of cold stress is, in many ways, similar to preventing heat stress. Training and recognition of the hazard is especially important.

All personnel will receive training on the cause, symptoms, and most importantly, methods of prevention of cold stress injuries.

## Clothing.

Prevention of hypothermia and other cold injuries is best accomplished by protecting workers from cold and moisture.

Clothing is the most important factor in prevention of injury.

Personnel working on land should layer clothing with outer layer being wind and water resistant.

The layers should be capable of being vented at wrist, neck and waist to reduce wetting by perspiration.

Protect extremities that have poor circulation.

Keep head and face covered.

Wear insulated foot wear, keep socks dry (bring extra socks as needed).

Gloves are extremely important.

Never allow bare skin to contact metal surfaces at sub-zero temperatures.

#### Acclimatization.

Do not count on acclimatization.

A limited degree of acclimatization can occur from exposure and working in cold environments.

Some physiological changes do occur but people also learn how to more effectively protect themselves from temperature extremes.

## Fluid Replacement.

As with heat stress, blood circulation and heat transfer is critical to dealing with cold temperature extremes.

Cold weather causes significant water loss as a result of the dryness of the air.

Fluid intake should be increased to prevent dehydration which directly affects blood volumes and flow to the extremities.

Warm, sweet, caffeine-free, nonalcoholic drinks and soup offer the best fluid replacement and provide caloric energy.

## Work-Rest Regimens.

When temperatures are less than 20 degrees F (actual or windchill) heated warming shelters should be made available.

Workers should use these on regular basis. See Table I at the end of this procedure for guidelines for scheduling breaks.

#### Diet.

As with any work in extreme temperatures, personnel will be instructed to eat a well-balanced diet to replace calories burned and provide necessary vitamins and nutrients.

## **Environmental Monitoring.**

Regular monitoring of the environment by recording wind speed and actual thermometer readings for comparison to the windchill chart should occur at regular intervals depending on conditions. See Table I at the end of this procedure for wind chill equivalents.

#### Prohibited Activities.

Alcohol should not be consumed since it increases blood circulation to the skin and interferes with internal thermostatic control. Alcohol also interferes with mental acuity which can lead to risk taking.

Cigarette smoking should be prohibited since the nicotine restricts flow of blood to the extremities.

#### ACGIH TLV Guidelines:

The current edition of the American Council of Governmental Industrial Hygienists' Threshold Limit Values (TLV) provides a reference on cold stress prevention.

Some of the TLV information is summarized in the following Table I.

### F.6.e. Treatment of Injuries

### Trench Foot, Frost-nip and Frost Bite.

These injuries require immediate response, including removal of the individual from a cold environment, the gradual warming of the affected areas, having the victim not use the affected limbs, (drive victim or carry, do not allow the victim to walk).

Obtain immediate medical attention as these types of injuries become more severe as exposure progresses.

AVOID RAPID WARMING OF EXTREMITIES.

### Hypothermia.

Hypothermia is a life threatening condition that requires immediate response. Remove victim to a warm area. The individual may be disorientated and unable to talk clearly or understand you.

Help the individual to a warm place and wrap them in warm blankets or bathe them (if possible) in warm (not hot) water.

If they are conscious give hot (non-caffeine) liquids to drink.

Summon immediate medical attention. UNTREATED HYPOTHERMIA CAN LEAD TO VENTRICULAR FIBRILLATION (HEART ATTACK) AND DEATH.

## F.7. Hazard Communication Program

The Envirocon Program, in its entirety, is located in a separate labeled notebook in the Envirocon Project facility. The notebook is available for review by employees at any time during normal work shift. Envirocon will be responsible for maintaining a copy of their Hazardous Communication Program and MSDSs on site.

### F.7.a. Subcontractors

Subcontractors will be responsible for keeping an individual copy of their respective programs.

## F.7.b. Material Safety Data Sheets (MSDSs) and Inventory Sheet

MSDSs will be located in a separate labeled notebook in the Envirocon Project Trailer. MSDSs will be available to all employees for review during the work shift.

An inventory sheet identifying all chemicals brought onto the site will be included in the front of the MSDS notebook.

## F.7.c. Container Labeling

All containers received on site will be inspected to ensure the following:

- All containers clearly labeled;
- Appropriate hazard warning; and

Name and address of the manufacturer.

## F.7.d. Employee Training and Information

Prior to starting work, each employee will attend a health and safety orientation and will receive information and training on the following: An overview of the requirements contained in the Hazardous Communication Program. This training shall include at a minimum the following:

- o Hazardous chemicals brought to the site for the project;
- The location and availability of the written Haz Comm Program;
- o Physical and health effects of the hazardous chemicals;
- Methods of preventing or eliminating exposure;
- o Emergency procedures to follow if exposed;
- How to read labels and review MSDSs to obtain information; and
- Location of MSDS file and location of hazardous chemical list.

## F.7.e. Documentation of Training

Documentation of initial training to the components of the Hazard Communication Program will be maintained in the individual training files maintained on site.

#### G. SITE SAFETY PROCEDURES

This section addresses safe work practices and task-specific safety procedures that will be used to control hazards on site.

#### G.1. Code of Safe Work Practices

Every employee has a responsibility to ensure that the program proceeds efficiently and safely. The following procedures constitute the basic safe work practices expected of every employee:

## G.1.a. Conducting Yourself in a Responsible Manner

- Perform all tasks in a safe and approved manner.
- o Do not direct an air hose at another person. Do not use compressed air to remove debris from clothes, hair, or any part of the body.
- o Honor the barricades erected by other contractors on the job site.
- o Do not work while your ability or alertness is so impaired by fatigue, illness, or other causes that they might unnecessarily expose yourself or others to injury.
- O Workers shall not handle or tamper with any electric equipment in a manner not within the scope of their duties, unless they have received instructions from a qualified, licensed electrician.
- o Do not use any form of solvent, gasoline or kerosene for cleaning hands or clothing. Use soap and water or other cleansers intended for the purpose.
- o Use handrails when climbing or descending stairs and walkways.
- o Do not run, except as necessary in an emergency.
- o Do not jump (e.g., climb off equipment using three points of contact, walk down stairs, use platforms to cross trenches).
- Always stand on an approved ladder to remove articles that may out of reach from floor level.
   Do not stand on chairs, boxes, or other makeshift devices.
- o Loose or frayed clothing, loose or hanging long hair, dangling ties, finger rings, etc., shall not be worn around moving machinery or other areas where they may become entangled.
- Do not improperly use, mishandle, or tamper with health and safety equipment and sampling devices.
- o Personnel shall not drop or throw any articles or materials of any kind unless a specific procedure has been developed to do so safely.

# G.1.b. Participate in Safety Programs

There are a number of ways for you to influence the safety on site. Don't just complain about problems, participate in your own safety.

- Attend each day's work briefing as scheduled.
- Attend all required safety meetings, training, or briefings.
- Complete safety observer reports when you want to make a suggestion, observe a commendable act of safety or quality, take a "time out for safety" to correct an unsafe act or condition.
- o Approach every task with incident free performance in mind ... ZIP!
- o Ask questions when you are uncertain about a procedure or equipment use.
- Participate in the evaluation or investigation of any accident or incident when you are requested to do so.
- If you fear reprisal use the Envirocon safety Hotline 800-224-7389.

## G.1.c. Supervisors Play a Leadership Role in Safety

As with all aspects of conducting operations, the supervisor is ultimately responsible for carrying out work in accordance with company policies and procedures, and in accordance with the specifications and applicable regulations.

- o Take a leadership role in establishing safety a safety culture on site.
- o Give employees frequent accident prevention instruction and encouragement.
- o First through encouragement and incentives, ensure that employees observe and obey all applicable Company, State or Federal regulation and order as is necessary to the safe conduct of the work. When necessary, compliance must be compelled using progressive disciplinary measures described in this document.
- o Ensure that employees are qualified for the work they are assigned.
- o No one shall knowingly be permitted or required to work while the employee's ability or alertness is so impaired by fatigue, illness, or other causes that they might unnecessarily expose the employee or others to injury.
- o Daily "tailgate" safety meetings shall be held to discuss safety concerns, instruct on new procedures, and discuss lessons learned from investigations and other related safety topics.
- o Encourage and listen to the suggestions of all employees.
- o All work shall be thoroughly planned and supervised to prevent injuries in the handling of materials and in working together with equipment.
- o Inspect the site daily.
- o Investigate all incidents.
- Ensure thorough documentation of all aspects of the safety program.

# G.2. Employee Participation

This project has established a variety of procedures to encourage the participation of employee in their own safety. Employee participation includes all Envirocon, and lower tier subcontract personnel.

## G.2.a. Training

Training is required for each employee before starting any new task or working in a new area. Training is considered an employee participation process. Employees are encouraged to ask questions and utilize training sessions to familiarize themselves with procedures.

## G.2.b. Daily Safety Briefing

Each day's work begins with a safety briefing. These briefings shall be conducted in a manner to encourage employee participation.

Supervisors shall report the plan of the day for all employees. This should include other work that may occur near the project site or impact on project work. Special tasks expected for the day.

- o Discuss lessons learned from incidents on this site or others.
- o Report and discuss safety observations made by employees.
- Report and discuss times out for safety.
- o Discuss employee suggestions.
- o Recognize safety performance (good and unsatisfactory).

## G.2.c. "Time Out for Safety" Authority

The "time out for safety" authority is intended to encourage employees to take initiative in correcting unsafe conditions or behaviors. Where an unsafe condition or behavior poses an imminent threat that can be readily addresses without a change in procedure or policy, each employee is authorized to correct the situation or report the issue. If the unsafe condition can not be readily corrected, your supervisor should be notified to have it corrected. Examples:

- Stop another employee that is driving into the wrong direction.
- o Grab a roll of barrier tape to mark a broken step on a stairway and report it to your supervisor.
- o Moving several boxes blocking the access to an eye wash.
- o Flagging traffic around a spill until a response crew arrives.

# G.3. Safety Procedures for General Labor and Mobilization Tasks

# G.3.a. Good Housekeeping

Housekeeping is the hallmark of employees who care about their site and their safety:

- o Keep your work area clean and orderly.
- o Good housekeeping practices shall be maintained continually.
- o Keep work, storage, and access areas clean of tools, equipment, and debris.
- o All means of egress shall be kept unblocked, kept clear of debris and slip or trip hazards, kept well lighted, and kept unlocked at times.
- o Clean up or otherwise remove slip/trip/fall hazards immediately.

- o Do not leave boards with protruding nails or other loose material on the floor where they may be stepped on.
- o Keep aisles and walkways clear of electrical and telephone cords.
- Do not overload electrical outlets.
- o Electric cords shall not be exposed to potential damage from vehicles.
- o Mark or barricade slip/trip/fall hazards that can not be removed.
- o Any time work is performed overhead, barricades shall be erected.
- o Barricades shall consist of caution (yellow) or danger (red) barricade colors and appropriately worded tape or signs.
- o All barricades shall be removed when not in use.

#### G.3.b. Follow Standard Procedures

Hazardous waste operations involve a number of standard procedures which are particularly important. Make these procedures a habit.

- o Use the Buddy System when performing operations in hazardous areas; when working with hazardous contaminants; when physical capabilities may become stressed (heat stress); or working in proximity of operating machinery or equipment.
- Practice contamination-avoidance techniques.
- o Enter and exit the Exclusion Zone (EZ) and the Contamination Reduction Zone (CRZ) through designated areas.
- o Complete sign-in/out logs when required.
- o Do not eat, drink, chew tobacco or gum, smoke, or engage in any other activity that may increase the possibility of hand-to mouth contact in the EZ or the CRZ. (Exceptions may be permitted by the Project Health and Safety Manager (PHSM) for other reasons, such as to allow fluid intake during heat stress conditions.)
- Do not use lighters or matches in the EZ and CRZ.
- o Employees under a physician's care and/or taking prescribed narcotics must notify the designated site safety supervisor.
- o Lift material in a safe manner and avoid strains. Bend your knees, keep your back straight, and push upwards with your legs when lifting. The lifting of heavy and bulky objects will normally be done by or more shop personnel. Lifting heavy/bulky objects improperly can result in needless injury.
- o Get help (mechanical help or more people) when lifting heavy or awkward materials.
- o Wear the personal protective equipment (PPE) specified in the site HASP, including hard hats, steel toed boots, and safety glasses that must be worn at all times in active work areas.
- o If you are required to wear a respirator, remove facial hair (beards, long sideburns, or mustaches) that may interfere with the satisfactory fit of the respirator mask.

- o Use safety devices provided for your protection (e.g., handrails, guards, pressure relief valves, and seat belts). Do not remove these devices while the equipment is being operated.
- o Never approach within 25 feet of the operating area of a piece of equipment without first making eye contact with the operator, signaling your intention, and receiving an acknowledgement from the operator. If you wish to approach the equipment (e.g., to speak with the operator) the operator must first lower all buckets, blades, etc. and idle the engine before you approach.
- When ground personnel support heavy equipment, pay particular attention to pinch points (e.g., the counterweight swing radius and the tracks of an excavator). Keep out from under suspended loads.

### G.3.c. Follow Safety Procedures

In addition to standard procedures, there will be many site specific procedures to learn and follow. You need to learn these from your task-specific training and follow the procedures. If you feel the procedures are incorrect or inadequate it is improper to take it upon yourself to modify procedures. Ask your supervisor, make suggestions, or raise questions during planning and training.

- Attend, pay attention, and ask questions during procedure training and briefings.
- o Implement, adhere to, and follow established rules, guidelines, procedures, plans, etc., as specified.
- o Follow proper decontamination procedures.
- o Make sure fall protection or fall arrest systems are in place when working at elevations greater than 6 feet above the surrounding work area.
- o Follow the work-rest regimens and other practices required by the heat stress program.
- o Where appropriate, lockout procedures shall be used.
- o Employees shall not work under vehicles supported by jacks or chain hoists without protective blocking that will prevent injury if jacks or hoists should fail.
- o Obey all authorized safety signs and demarcations. Do not place or remove these items except as authorized by the Site Health and Safety Supervisor (HSS).
- o Become familiar with the on-site hazards, work zones, PPE requirements, and decontamination methods.

# G.3.d. Permit Required Procedures

Many of the most important procedures dealing with the most dangerous hazards involve permit requirements to ensure that necessary precautions are taken before work begins. Pay particular attention to these procedures.

- Do not enter a permit-required Confined Space without a permit, and follow all requirements of permits as issued.
- O Don't rely on postings to warn you of confined space hazards. When in doubt ask for a permit and testing. Manholes, underground vaults, chambers, certain confining excavations, tanks, silos or other similar spaces may have a confined space hazard.

- o Check with your Supervisor prior to starting any Hot Work operation (welding or cutting operations) and, if you are working in an area that requires a Hot Work Permit, follow the permit as issued.
- Depending on the fire hazards at your facility, hot work permits may be required for use of cigarette lighters, electrical equipment that is not intrinsically safe, flash photography, motors, engines, or spark producing metal tools.
- The combination of hot work and confined spaces is particularly dangerous even if you don't plan to enter the space! No burning, welding, or other source of ignition shall be applied to, or near any enclosed tank or vessel, even if there are some openings, until it has first been determined that no possibility of explosion exists and authority for the work is obtained from the foreman or superintendent. This includes small voids too! A sealed can, doubler space, storage compartments or similar small spaces can contain flammable debris or explosive vapors.
- Do not dig or drive objects into the ground without first ensuring that a utility locate has been performed.
- o Check excavations daily for slope stability and air quality. Do not enter an excavation unless authorized by the HSS and/or excavation competent person. Maintain safe means access and egress from all excavations.
- o Follow lockout/tagout procedures when working on equipment involving moving parts or hazardous energy sources. Install and remove locks and tags only in accordance with procedure and only when authorized.

## G.3.e. Use Tools Properly

Tools, especially hand tools, are used frequently with minimal supervision. It can be all to easy to use tools improperly and create serious safety hazards.

Use all tools in the manner intended and/or prescribed. The operating instructions for all tools and equipment ARE MANDATORY.

Modification of use or design must be in accordance with the written instructions or permission of the manufacturer.

Do not suspend tools or any other items using electrical cords.

In locations where the use of a portable power tool is difficult, the tool shall be supported by means of a rope or similar support of adequate strength.

Air hoses shall not be disconnected at compressors until the hose line has been bled.

Inspect safety devices before every use including but not limited to:

respirators,

personal protective equipment,

body harnesses,

lanyards,

monitors,

fire extinguishers,

confined space retrieval systems (not the same as fall protection harnesses), and

manbaskets.

Inspect other tools and equipment before use.

Inspect power tools, looking especially for damaged insulation or missing ground plugs on electrical cords.

Inspect cutting devices looking especially for properly sharpened and guarded edges.

Inspect hand tools look especially for chisels, hammers and punches with mushroomed heads; files without handles, and hammers with broken handles.

Do not use defective equipment.

Don't leave defective equipment in service for others to use. Remove it from service and report the problem to your supervisor.

At a minimum, defective equipment must be tagged out of service.

Use a red tag placed near starting switches or levers.

Describe the reason the equipment is tagged out.

Write your name and the date on the tag.

Alternatively, defective equipment can be taken out of service by destruction and disposal.

Use ground fault circuit interrupters (GFCI) for cord and plug equipment used outdoors, in damp locations, or when equipment is not plugged directly into permanent wiring.

Use only extension cords rated for hard service or junior hard service (e.g., SO, JSO, SOW, JSOW). A UL label on a local hardware store flat cord is probably NOT rated for this service!

Keep electrical cords out of walkways and accumulations of water unless protected and rated for such service.

# G.3.f. Operate Equipment Safely

All equipment is to be operated in accordance with manufacture's written instructions and/or manuals.

Equipment shall not be modified or operated out of specified limits without written permission from the manufacturer and the health and safety manager for the project.

Only trained and authorized persons shall operate machinery or equipment.

Do not operate equipment unless you are properly trained and authorized to do so in a manner consistent with the owner/operators manual.

DO NOT use a piece of equipment, which has been tagged out of service! Do not remove red tags without authorization from the person placing the tag or the person responsible for the repairs.

Inspect equipment before using it.

Heavy equipment inspections shall be documented. Note all discrepancies and tag out equipment that may be dangerous to operate.

Red tags must have a description of the reason for the tag, the name of the person placing the tag, and the date the tag was applied.

Machinery shall not be serviced, repaired, or adjusted while in operation, nor shall oiling of moving parts be attempted, except on equipment that is designed or fitted with safeguards to protect the person performing the work.

Use vehicle or equipment seat belts any time the vehicle or equipment is in motion.

Excavating equipment shall not be operated near tops of 'cuts, banks, or cliffs if employees are working below.

Do not maneuver equipment into the working area of other equipment without first making eye contact with the operator working in the area and signaling your intentions to maneuver into that area.

Always acknowledge that you understand that other equipment or ground personnel may enter your working area.

Do not allow people on foot to approach without lowering hydraulically lifted or suspended components (e.g., buckets, blades, bellies) and reducing engine speed to idle.

Tractors, bulldozers, scrapers, and carryalls shall not operate where there is a possibility of overturning in dangerous areas such as the edges of deep fills, cut banks, and steep slopes.

Do not allow supporting ground personnel to work within pinch points of the equipment (e.g., the swing radius of a counterweight and the tracks on an excavator) or under suspended loads.

## G.3.g. Be Prepared for incidents

Become familiar with the emergency response plan so that you can respond properly in an emergency.

Become familiar with the locations and types of emergency equipment, such as fire extinguishers, emergency showers, or air horns.

Report all incidents to your supervisor immediately!

Participate fully and truthfully in incident investigations.

# G.4. Intrusive Work (including excavations and drilling)

The OSHA standards for excavation safety (29 CFR 1926, Subpart P) shall be followed at all times during excavation activities. Excavations include "any man-made cut, cavity, trench, or depression in an earth surface, formed by earth removal." This standard applies regardless of the depth of the excavation, for example utility locates should be done at any depth.

# G.4.a. Excavations (5 feet or deeper that personnel will be entering)

In excavations 5 feet deep or deeper, a competent person shall ensure that the following requirements are met.

Table G.4.a Excavation Sloping Requirements

Stable Rock		Vertical (90 Degrees)
Type A Cohesive	Clay, Hardpan, Silty Clay	3/4:1 (53 degrees)
Type B Cohesive/Granular	Silt, Unstable Rock, sandy Loam, Fissured type A	1:1 (45 degrees)
Type C Granular	Gravel, Submerged, Loamy, Sand	1.5:1 (34 degrees)

<sup>(1)</sup> Excavations greater than 20 feet deep must be designed by a PE.

Provide safe access and egress. This includes ladders or ramps. In trenches, a point of egress must be within 25 feet at all times while in the trench. Ramps shall be sloped so as not to require the use of hands to walk out of the excavation.

Employees must be protected from cave-ins.

In trench excavations the competent person must have all sides sloped in accordance with OSHA requirements on either side of the trench where personnel are working.

In excavations, at a minimum, employees within a distance equal to the depth of a cut face shall be protected. Where employees are in excavating equipment, at a minimum, the equipment shall not undercut a face in such a way that the cab is closer than the height above the cab.

Alternative protections, specified by OSHA include trench boxes or shoring.

In excavations where employees may be required to enter, excavated or other materials shall be effectively stored and retained at least 2 feet or more from the edge of the trench.

#### G.4.b. Water

Whenever, groundwater may be encountered; a specific classification and slope adjustment will be made on site by the Competent Person. At a minimum an additional 1/2 to 1 slope will be added if flowing conditions are encountered at the toe of the slope where personnel are working.

#### G.4.c. General Excavation Practices

In excavations with potential airborne vapor hazards, where employees may be required to enter shall have the atmosphere tested before each entry and as conditions change.

Employees exposed to vehicular traffic shall be provided with and instructed to wear warning vests made of reflective or high visibility materials.

All employees in trenches shall wear the appropriate PPE, e.g., hard hats, safety glasses, hard-toed boots, etc.

No employees will be permitted under loads.

Dust conditions shall be kept to a minimum in accordance with the project dust control plan.

Where employees or equipment are allowed to cross over excavations, all walkways and/or bridges will have guardrails.

Adequate barrier protection will be provided at remotely located excavations (e.g., reflective cones or sawhorse barriers).

Each excavation must be inspected daily. If evidence of cave-ins or slides is apparent, all work in the excavation must cease until necessary precautions have been taken to safeguard employees.

Where vehicles or equipment operate near excavations or trenches, the sides of the excavation must be shored or braced as required to withstand the forces exerted by the superimposed load.

## G.4.d. Utility Lines

Utility lines, both above and below ground, must be addressed in any excavation activity regardless of depth.

Be aware and always suspect the existence of underground utilities such as electrical power, gas, petroleum, telephone, sewer and water. Underground utilities are a concern at any depth.

Overhead and buried utilities should be located, noted and emphasized on all excavation and work plans (regardless of depth of excavation). Post warning barricades on the ground along the line of excavation in order to alert excavating equipment approaching overhead utilities.

When excavating within 6 feet of buried utilities, first locate and mark the expected location. Due to the inaccuracies of locating, hand digging (i.e., potholing) will be used to visually confirm the utility location before using heavy equipment.

When excavating within 6 feet of underground utilities, a spotter shall be used to assist mechanical excavating equipment in locating utilities.

When excavating within 5 feet of underground electrical, phone, flammable gas/liquid lines de-energize the lines. Hand-excavation shall be conducted when at 2-feet or less from the utility.

The requirements above should be taken as a minimum. High volume or high pressure mains should be given a wider margin. Fiber-optical lines should be given additional margin. High pressure or high volume water lines should be approached in the same manner as "more dangerous" utilities.

#### Overhead Utilities.

When overhead electrical power lines exist at or near an excavation site, consider all wires to be alive and dangerous. Support overhead utility lines as necessary. Overhead electrical lines may induce a current without actually touching the lines. Be sure to maintain clearances from electrical lines of 50 kV or greater in accordance with 29 CFR 1926.550(a)(15). Place ground markers to indicate overhead hazards as well as those below ground.

### G.4.e. Competent Person.

The excavation competent persons are assigned in the organization and key personnel section earlier in this document. The excavation competent person is authorized to, and shall take prompt action to correct unsanitary, hazardous, or dangerous working conditions. Other responsibilities include (but are not limited to):

The competent person will supervise each utility locate procedure to ensure proposed areas for excavation are checked.

The competent person will directly oversee all operations and be present on site at all times while employees are in the excavation.

The competent person will make a daily inspection of the excavation area before each shift begins, after any changes in the excavation area or after a rainstorm.

The competent person will ensure that personnel in excavations will not work under suspended loads.

The competent person will ensure that work activities on the surface of the excavated area will be restricted to prevent working above personnel.

The competent person will ensure that banner guard and barriers will be placed across public access to the excavation areas at night to protect and warn personnel as necessary.

The competent person will ensure that personnel exposed to high traffic areas will wear high visibility vests; orange for daytime and reflective for night operations.

## G.5. Falling and Tripping Hazards

## G.5.a. Falls-Housekeeping and Materials Storage.

All material shall be stored in a manner that will ensure that the material is safe from unexpected movement, falling, rolling, blowing, or any other uncontrolled motion.

Materials and supplies shall be kept away from edges of floors, stairways and access/egress routes (36 inches minimum).

Forms and scrap lumber with protruding nails and all other debris shall be cleared from work areas, passageways, stairs, and in and around buildings or other structures.

Tripping hazards, protruding nails, oil slicks, scrap materials and other hazardous conditions occurring during the course of the job shall be eliminated as work progresses.

Tools and equipment shall not be strewn about where they might cause tripping or falling hazards and shall, at the end of each workday, be collected and stored or disposed of as appropriate.

All food waste and oily/greasy rag containers shall be equipped with tight closing lids.

# G.5.b. Falls-Slippery Surfaces, Unstable Surfaces, Uneven Terrain

Wet conditions on the site caused by rain and/or work activities are likely to be encountered during the project.

Employees will be informed of the hazards associated with walking on slippery and or uneven surfaces.

Mark or remove trip hazards.

Proper foot wear will be provided to all employees involved with work activities during these conditions.

When possible, pedestrian traffic will be redirected around potentially dangerous areas.

Everyone should keep the work area and other areas where people may walk clean and orderly.

Tools, debris, and other objects should not be left on the floor, decking, or other areas where they present hazards during a job or after a job is completed.

Oil spills and slippery spots shall be cleaned up immediately.

Extra precautions should be taken when walking on steel decking during wet/icy weather and/or oily conditions.

Never walk on piping, never take dangerous shortcuts, and avoid jumping from elevated places.

#### G.5.c. Falls-Ladders

Personnel must visually inspect each ladder for defects before use, defective ladders shall not be used.

When working from a ladder, wear fall protection if work requires your body to extend past the margins of the ladder sides.

While ascending or descending a ladder, carry nothing which will prevent holding onto the ladder with both hands in order to maintain three-points of contact at all times.

Metal ladders will not be used if there are any existing or potential electrical hazards in the work area.

All ladders must be securely tied off or secured by an attendant while the ladder is in use.

When working from ladders, work facing the ladder with both feet on the rungs.

Workers shall not stand with their waist above the top step of a ladder without wearing a safety belt that is securely tied off to a local structure.

Short ladders shall not be spliced together to make a longer ladder.

The base of the ladder must be set back a safe distance from the vertical; approximately one-fourth the working length of the ladder.

# G.5.d. Falls-Fall Protection Working from Elevated Surfaces

Duties involving heights greater than 6 feet above the ground include:

Utilize fall protection or restraint system as described in the Envirocon Fall Protection Program.

Append a task specific AHA to this plan to specify type and design of fall protection system on a case by case basis.

#### G.5.e. Illumination

Light plants or other sources of light shall be used as necessary to maintain the requirements described in Table D-65.1 of 29 CFR 1926.65.

#### G.6. Portable Tools

#### G.6.a. Deadman switches

Portable electrical power tools will be equipped with constant pressure switches or controls that will shut off power when the pressure is released.

#### G.6.b. Guards

All tools will be equipped with appropriate guards, the guards will be properly adjusted, and the guards will be replaced if they are damaged.

#### G.6.c. Field Modifications

Table I	0-65.1 of 29 CFR 1926.65; Illumination of Work Areas
Febl Candles	Area of Operations
5	General Site Areas
3	Excavation and waste areas, accessways, active storage areas, loading platforms, refueling, and field maintenance areas.
5	Indoors: Warehouses, corridors, hallways, and exitways.
5	Tunnels, shafts, and general underground work areas. (Exception: minimum of 10 foot-candles is required at tunnel and shaft heading during drilling, mucking, and scaling. Mine Safety and Health Administration approved cap lights shall be acceptable for use in the tunnel heading.
10	General shops (e.g., mechanical and electrical equipment rooms, active storerooms, barracks or living quarters, locker or dressing rooms, dining areas, and indoor toilets and workrooms.
30	First aid stations, infirmaries, and offices.

Hand/Powered tools may be used only for their intended purpose. The design or guard capacity shall not be exceeded or circumvented by unauthorized attachments or modifications.

#### G.6.d. Electrical

All portable electrical powered tools shall be double insulated or grounded.

Ground Fault Interrupters (GFCIs) will be used with all outdoor temporary wiring.

Power tools shall be hoisted or lowered by a hand line; never by the cord or hose.

#### G.7. Fire Prevention

#### G.7.a. Extinguishers

Extinguishers will be readily available on site. At a minimum, extinguishers will be places as follows. (Extinguishers of greater size or inclusive types may be substituted).

Heavy Equipment will be equipped with a 5 # ABC fire extinguisher rated at 2-A:10-B:C.

Fuel depots and flammable liquid storage/handling areas

20# ABC fire extinguishers with a rating of 2-A:40-B:C will be provided within 75 feet of, but no closer than 25 feet to, all refueling depots and flammable storage areas.

10# ABC fire extinguishers with a rating of 2-A:40-B:C will be provided within 75 feet of, but no closer than 25 feet to, all mobile fueling stations, flammable liquid transfer areas, and generators.

Trailers, buildings and work areas

All trailers and work areas will have at least a 5 # ABC fire extinguisher rated at 2-A:10-B:C.

Extinguishers in trailers will be mounted near a clear evacuation egress point (door).

Extinguishers on site will be located at the primary entrance to the work area.

Smoke detectors will be mounted in all occupied trailers.

Access routes to fire extinguisher shall be kept clear at all times.

All fire extinguishers shall be inspected monthly and serviced annually.

## G.7.b. Fighting Fires

Personnel are authorized to fight fires in the beginning stages of development and only to the extent that they judge this can be done safely. Personnel are not required to fight fires.

When a fire is detected, first ensure that the area is safely evacuated and the supervisor is being notified so that the fire department can be summoned.

Ensure your own evacuation route before attempting to extinguish a fire.

If more people or more extinguishers are needed, the effort should be abandoned.

# G.7.c. Facility Systems

A task-specific procedure will be developed where project work (such as demolition) potentially jeopardizes facility systems.

Facility managers will generally be notified when any work is done on any facility systems such as fixed fire suppression systems for buildings, or where excavations encroach on facility systems such as fire hydrants or related piping.

When excavating or performing demolition near facility systems, the facility systems should be uniquely marked to avoid damaging these systems.

Facility fire hydrants shall not be used without notification and permission of the facility manager or designated representative.

# G.7.d. Flammable Liquids, Fuels and Fueling

Protection of depots

Depots will be located in such a manner as to provide clear access for fire trucks.

Depots will be protected from damage from vehicle or equipment damage using bollards, bails, curbs or similar devices.

Portable containers

All portable fuel cans shall be free of deformities which threaten the integrity of the container.

All flammable storage cans of 1 gallon capacity or greater shall have self closing lids and flame arresters (i.e. safety cans).

All flammable storage containers shall be labeled as to their contents, and shall include a warning regarding flammable contents.

Gasoline engines shall not be fueled while the engine is running.

#### G.7.e. Containments

All equipment shall be fueled through funnels or spouts that prevent spillage. All spouts and funnels must be of metal construction.

NFPA flammables (e.g., gasoline) will not be stored in the same containment as NFPA combustibles (diesel fuels).

Containers and depot tanks in excess of 5 gallons will be held or stored in containments designed to collect spillage.

Covered containments must be capable of containing a volume equal to:

the capacity of the largest tank, plus

the combined displaced volumes of all tanks and containers stored in the containment.

Uncovered containments must be capable of containing a volume equal to:

the capacity of the largest tank, plus

the combined displaced volumes of all tanks and containers stored in the containment, plus

25 percent excess capacity for rain collection.

Uncovered containments will be kept free of standing water.

Water in excess of 5% containment capacity will be pumped off within a 48 hour period.

Water will not be discharged onto the ground unless free of visible residues or films.

Bonding and grounding

Any transfer of a flammable liquid from one container to another requires bonding from one container to the other.

All flammable fuel depot tanks set up on site will be grounded.

# G.7.f. Smoking, Fire and Hotwork

Hotwork permits shall be issued for all applicable hot work according to facility requirements.

Smoking and hot work will not be allowed within 50 feet of fuel depots or other flammable liquid storage and/or transfer areas.

Fuel depots or other flammable liquid storage and/or transfer areas will be posted against smoking, open flames, or hot work.

Oily rags storage

Oily rags, trash and other combustible scrap materials shall be placed in closed receptacles separate from other trash.

Oily rags shall be stored in containers approved for this purpose.

## G.7.g. Welding, Cutting, and Hotwork

General

All welding and hotwork will be done in accordance with Envirocon's Health and Safety Procedures 11.0 and 12.0;

Fire Watch

A fire watch shall be maintained for at least 30 minutes after completion of welding/cutting operations so that possible smoldering fire can be detected and extinguished.

Fire watch personnel shall be instructed in the selection and use of appropriate fire extinguishers.

Fire watch personnel shall be familiar with facilities and the procedures to be followed in the event of a fire. They watch for fires in all exposed areas and attempt to extinguish fires only when obviously within the capacity of the equipment available.

The requirement for a fire watch may be waived when, after completion of the Welding, Cutting, and Heating Permit, it has been determined that there is no possibility of sparks, slag, hot material, etc., coming into contact with flammable or combustible solids, vapors, liquids, or residues.

## G.8. Lifting Heavy Objects

Heavy objects will be lifted using appropriate machinery or enough manpower as is required. Employees will be specifically instructed to seek assistance in lifting heavy objects.

# G.8.a. Before Lifting:

Determine if the object can be moved by some other means (mechanical device).

Determine if the object is too bulky and would obscure vision; if so, get another person to help carry it. When handling material with others, everyone should agree on who will act as leader and give the signals. Loads should not be released until everyone is ready. Teamwork is important.

Determine if the object is within the lifter's capability (a preliminary "heft" will indicate this).

Determine if the footing around the object is solid.

# G.8.b. Lifting

Legs should be bent at knees, back nearly vertical, body as close to the object as possible, feet apart but not further than shoulder width. Take a firm hold and straighten knees. Back is still straight and upright. Pull load close to body and lean back slightly to keep center of gravity over feet.

Avoid twisting the body when lifting or carrying loads.

## G.9. Sanitation and Hyglene

## G.9.a. Drinking Water

An adequate supply of potable water will be provided on site.

Portable water containers will be capable of being tightly closed and equipped with a tap.

Water shall not be dipped from containers for drinking purposes. Single service, disposable drinking cups will be provided.

No one shall place any objects (e.g. soda pop, ice tea, etc.) in coolers.

## G.9.b. Restrooms and Hygiene Facilities

From Tab	ole D-65.2 of 29 CFR 1926.65
Number of Employees	Minimum Number of Facilities
20 or fewer	One.
21 to 199	One toilet seat and one urinal per 40 employees
200 or more	One toilet seat and one urinal per 50 employees

Toilet facilities (sanitary sewer w/flushing toilets, chemical toilets, recirculating toilets, or combustion toilets) including hand washing stations will be provided in accordance with 29 CFR 1926.65(n) and Table D-65.2.

#### H. RECORDKEEPING

The health- and safety-related documents for the project will be handled in the following manner:

## H.1. Training and Safety Meeting Records

Certificates of completion for all mandatory training for Envirocon and lower tier subcontractor employees will be maintained on site at this site. Minutes for safety and health meetings, including daily safety briefings, will also be maintained on site. These records are located in Envirocon's Safety Trailer office.

## H.2. Injury/Illness

Copies of "Supervisor's Report of Injury or Illness" will be maintained on site. Envirocon's official OSHA 200 log is maintained at the Corporate office. See the emergency procedures below for accident reporting procedures. A first aid log will be used to document first aid cases as described below in the log keeping section.

### H.3. Accident Reports

Accident investigation reports will be maintained on site. All injuries will be reported to the client as well. See the emergency procedures below for accident reporting procedures.

### H.4. Employee Exposure Data

Detailed exposure monitoring records will be made available to the employees monitored. General information, without personal information will be made available to all members of the crew on site. After the project is completed, these records will be archived for at least 40 years.

#### H.5. Medical Surveillance Records

All medical records received on site will be forwarded to the corporate office after review. No medical records will be maintained on site; Fitness For Duty forms, however, will be available on site for all personnel.

## H.6. Written Programs

Written programs for compliance with the OSHA standards, such as respiratory protection, hearing conservation, and certain chemical exposure are maintained on the site as well as at the corporate office.

# H.7. Health and Safety Plans

At least one copy of the plan and any amendments will be maintained on site.

# H.8. Employee Access

All employees have a right to access most of the documents related to health and safety. Medical and training records are available only to individuals requesting their own records. Employees can receive copies of their medical records or air monitoring exposure records upon written request. Medical information can only be released upon the written consent of the individual.

## H.9. Health and Safety and Related Logs

The health and safety officer is responsible for maintaining logs of health and safety activities, including safety inspections.

## H.9.a. Health and Safety Log

This is a bound log of daily inspections and health and safety issues kept by the project health and safety officer.

## H.9.b. First Aid Log

Employees are required to report all injuries and illness regardless of how minor the incident may seem. These reports shall be documented on an injury/illness report form, or in the project first aid log where diagnosis and treatments involve only simple first aid diagnosis and/or treatments.

Treatment/diagnosis by 3<sup>rd</sup> party EMTs, physicians, nurses, or other medical professionals shall be reported using the injury/illness reporting procedures. Determination of OSHA recordability/first-aid shall be determined by the Corporate Director of Health and Safety in these cases.

This First Aid Log is a log of all reported injuries and/or illnesses reported to supervisors and/or the health and safety officer. This log shall document the report, date, name of the injured employee, nature of the injury/illness, diagnosis and the treatment given.

If no treatment is given the incident shall still be noted in the log. This shall include any dispensing of first aid supplies or administered by a supervisor, safety officer or other first aid trained employee.

Non-work related injuries/illness reports and use of prescription drugs should also be noted in this log.

Self-medication by employees with respect to non-prescription (i.e., Over The Counter (OTC)) pharmaceuticals unrelated for colds headaches or other non-work related ailments need not be documented.

#### I. INCIDENT AND EMERGENCY PROCEDURES.

This section documents procedures to be followed in the event of incidents and certain emergencies. Where possible these have been formatted to individual sheets for response training and ready reference when needed.

### I.1. General Emergency Procedures

This subsection describes procedures which are common to a variety of incidents.

### I.1.a. Responsibilities

The site supervisor is responsible for the overall conduct of emergency procedures. This includes maintaining an orderly succession of supervision; making necessary reports to all concerned parties; ensuring that the causes of accidents are identified and corrected; and ensuring that injured personnel (with or without life threatening injuries) are escorted to medical treatment by the site safety officer or other supervisory personnel.

The HSO has the responsibility for ensuring that the provisions of this HASP are adequate and implemented in the field. Changing field conditions may require decisions to be made concerning adequate protection procedures. The HSO is also responsible for conducting site inspections on a regular basis to ensure the emergency readiness. The HSO shall be notified of any on-site emergencies and shall be responsible for ensuring that the appropriate procedures are followed.

#### 1.1.b. First Aid

First Aid Kits are located in each Envirocon pickup, trailer; and decon facility.

A first aid trained individual will be on site at all times.

Emergency eye wash and showers will be located at the decon facility.

#### I.1.c. Evacuation Procedures

The site safety officer shall select and maintain appropriate assembly points for evacuations. The primary point of evacuation will be to the Envirocon personnel decontamination facility. At least one secondary assembly point shall be established by the safety officer and shall generically be an upwind point if fire or imminent release emergency would arise. General emergency directions include:

Turn off equipment whenever possible. Avoid leaving hazardous conditions in the process of evacuating.

Evacuate in the safest direction indicated by wind, smoke, fire, or other hazards.

Take a head count and report to the supervisor.

Do not leave the assembly area without reporting to the supervisor.

## I.2. Reporting and investigating incidents

All incidents at the site shall be reported. It is hoped that most incidents will be small and/or near misses. It is essential that these events be reported as well more serious incidents in order to learn from them and avoid the more serious accidents.

## I.2.a. Project and Facility Requirements

An incident is defined as follows:

A work-related injury or illness

An exposure to a hazardous substance above the allowable exposure limit

Property/vehicle/equipment damage

A uncontrolled fire or explosion

An unplanned spill or release (including air releases) to the environment

A permit exceedence

Any unexpected contact or damage to aboveground or below ground utilities

A "near miss" or an unplanned event that has a reasonable probability in resulting in one of the outcomes described above had the circumstances been different and for which modifications to management programs will reduce the probability of occurrence or the severity of the outcome.

## I.2.b. Reporting Incidents

Report all unplanned, unexpected, events or changes in conditions. Some examples include:

Personnel incidents such as:

injuries,

illnesses,

first aid cases,

fights or other acts or threats of violence,

fatalities, or

any personnel injuries or incidents which might be the result of acts of other contractors, subcontractors, or facility personnel.

Accidents such as:

motor vehicle accidents (with or without damages),

equipment accidents (with or without damages), or

property damage (including fires).

New, previously unknown, or unexpected potential hazards such as:

buried drums, cylinders, or hazardous materials containers,

unusual soil conditions (e.g., previously disturbed soils, soils with unusual odors, soils with unusual coloration),

floating contaminants (e.g., oil, chemicals, or sheens on water).

Environmental incidents such as:

oil or chemical spills,

Unauthorized personnel in work areas such as:

unauthorized workers on site,

unescorted public visitors,

media personnel, or

unescorted government visitors.

## 1.2.c. Procedures for Reporting Incidents

First Responder's Report

If your work is involved with the incident of interest, STOP WORK IMMEDIATELY!

Ensure the safety of the area from any imminent hazards.

Report to your immediate supervisor by radio or phone if at all possible.

If you must leave the area to make a report, find someone to help secure the area if at all possible.

Supervisors

Control imminent hazards as necessary.

Ensure that injuries are being taken care of, and assign someone to escort injured employees leaving the site for medical evaluation/treatment.

Ensure that the area is adequately secured.

Ensure that the scene is not further disturbed.

Visit the accident scene as soon as possible.

Interview injured workers and witnesses as soon as possible.

Reporting requirements

Report all incidents verbally to the client as soon as the area has been secured.

Follow up with a written report before the close of business.

Follow up with a written investigation report within 48 hours.

# I.3. Personnel Injury

#### 1.3.a. First Ald

The PM (or senior supervisor on site) and/or HSO shall ensure necessary first aid or medical attention is obtained. First aid shall be provided by qualified first aid providers or EMTs.

If personnel need medical evaluation, ensure that a safety officer or supervisor is assigned to escort the employee.

Do not allow injured personnel to drive themselves unless a doctor determines they are fit to do so.

If a doctor prescribes medication determine if that medication limits ability to drive. Do not allow employees to drive themselves if the medication impacts on driving safety. (If an employee wants to drive themselves and has been prescribed medication that will impact on driving safety the employee can wait to take the medicine at home if the doctor allows this.)

#### 1.3.b. Hazard Assessment

The PM (or senior supervisor on site) and/or HSO shall immediately investigate the nature and cause of injury in order to assess the hazard to ongoing site work. This should include consideration of working short handed if the injured person can not resume work right away. It is the senior supervisor's responsibility to stop work if necessary to make corrective changes.

## I.4. Heavy Weather

## I.4.a. High Winds

Outdoor equipment operations for non-intrusive activities will be suspended at wind speeds of 35 mph for 15-minutes, any gust of 55 mph or when dust control measures are no longer effective. Soil intrusive activities including excavation, truck loading or unloading, crane operations, work with sheet materials (e.g., liners); or work with large profile materials will be stopped at 25 mph.

## I.4.b. Lightning.

Outdoor operations will be suspended when lightning is within a 5 second count of the site (i.e., the time difference between seeing a lightning strike and hearing the sound). High profile equipment operations shall be suspended when lightning is within 15 seconds of the site. Safety officer may halt activities for lightning up to a 25-seconds away if fast approaching storms or multiple severe strikes are in evidence.

High profile operations include crane operations, drilling operations, or electrical wiring tasks.

Equipment operators shall stop their equipment and park it safely before heading for shelter.

No personnel will be left on the ground in an exposed location.

Preferred shelter is a permanent building. Personnel may also take shelter in trailers or low profile nubber tired equipment (e.g., pickups). Avoid driving pickups or any other equipment except to help evacuate personnel.

Work will resume after a 15-minute period without lightning.

#### I.4.c. Phone Threats

This includes bomb threats, threats against personnel, threats of violence or any other threatening communications made by phone or radio.

Do not hang up.

 Try to remain calm. It is important not to hang up on threatening callers. This may provoke an act of violence.

Listen carefully to background noises or conversations.

Take notes on the callers exact words if possible.

Try to get someone else to report the call immediately to the phone company on another line before the caller hangs up.

Report the call immediately to the senior Envirocon supervisor on site.

DO NOT discuss the call with anyone else.

The Envirocon supervisor shall immediately bring the call to the attention of the senior client's representative.

The senior supervisors from Envirocon and the client's project manager shall be responsible for determining if an evacuation will be called.

#### I.4.d. Rescue

Notify someone.

Put into effect the established emergency rescue procedures.

Know the locations of the emergency rescue equipment before the need arises.

# I.5. Emergency Contacts for Site\*

Position/Agency	Person/Radio	Phone
Fire Department		Emergency 911
Ambulance		Emergency 911
Police		Emergency 911
Envirocon Project Manager	Jeff Mikell	(801) 554-2461
Envirocon Project Superintendent	Brian Vibbert	(406) 546-9551
Health and Safety Supervisor	Doug Tisdell	(406) 544-6883
Envirocon Corp. Dir Health & Safety	Joe Ocken	(406)-523-1194
Envirocon Corp Ofc. Missoula, MT		(406) 523-1150
ENVIROCON SAFETY HOTLINE:		800-224-7389
Libby Police Department		(406)-293-3343
203 Mineral Ave,		
Libby, MT 59923		
Lincoln County Sheriff Department		(406)-293-7781
St. Johns Lutheran Hospital 350 Louisiana Avenue Libby, MT 59923		(406)-293-0100
Agency for Toxic Substances and Disease Registry (ATSDR) chemical exposures		(404)-639-0615 (emergency) (404)-639-6360 / 6000 (non- emergency)

<b>Appendix A: Voluntary Empi</b>	loyee's Emergency information Data Sheet
Last name	First Name
You may answer any of the questions	hered to help us respond to an emergency. All questions are optional, you like or leave any blank. The original copy is sent to the Corporate ained on site. If the information provided changes, you should submit a
Emergency Contacts (name as many In the event of an emergency who shows	
What City and State do they live in?	phone number?
What is their relationship to you?	
Emergency Contact for YOU!  How can we get in touch with you for p	project recalls, shutdowns, emergencies etc.?
What is the phone number there?	
Medical Conditions	
Are you alergic to any medications?	yes/ <b>□</b> no.
What are they?	
Are you alergic to insect bites or stings?	? □yes/□no.
What are they?	· .
Do you carry treatments or medicine(s) in an emergency? □yes/□no.	) (e.g., insulin, sugar/candy/food, bee sting kits) that needs to be given
What are they?	
Where is it kept?	
Are you or do you have:  Oyes/Ono: Hypertension  Oyes/Ono: Asthma  Oyes/Ono: Diabetes  Oyes/Ono: Hypoglycemia  Oyes/Ono: Epilepsy/seizure  Oyes/Ono: Fainting spells  Oyes/Ono: Irregular heart b  Oyes/Ono: Narcolepsi (slee	peat
Safety Officer's Notes:	
-	

- --

# Kennedy/Jenks Consultants

32001 32nd Avenue South, Suite 100 Federal Way, WA 98001-9625 253-874-0555 253-952-3435 (Fax) www.KennedyJenks.com

Envirocon

4381 Highway 2 West

PO Box 649

Libby, MT

DATE:

10 September 2004

SERIAL NO .: 002

SPEC. REF.: 01300

PROJECT: BNSF Libby Yard Response

Action 2004

K/J JOB NO.:

046022.11

SUBMITTAL NO.:

01300-2

PAGE:

1 of 1

ATTENTION:

Jeff Mikkel

NET = No Exceptions Taken

MCN = Make Corrections Noted

A. The action(s) noted below have been taken on the enclosed drawing(s).

A&R = Amend and Resubmit

RR = Rejected, Resubmit

NR = Not Reviewed

**Item** 

K/J Refer to Action

Comment

Manufacturer or Supplier

Title of Submittal / Drawing

002

**NET** 

No

Not Applicable

Schedule

Comment: None

Discussion: None

B. Corrections or comments made on the shop drawings during this review do not relieve the contractor from compliance with the requirements of the drawings and specifications. This check is only for review of general conformance with the design concept of the project and general compliance with the information given in the contract documents. The contractor is responsible for: confirming and correlating all quantities and dimensions, selecting fabrication processes and techniques of construction, coordinating its work with that of all other trades, and performing its work in a safe and satisfactory manner.

Dist	RIBUTION	SDRL	ENCL.
Envirocon	Jeff Mikkel	х х	x
Project Coordinator:	Dick Guglomo	x	X
Construction Manager	Dave Diem	x	x
Resident Engineer;	Brent Sowle	x	X
File		x	x



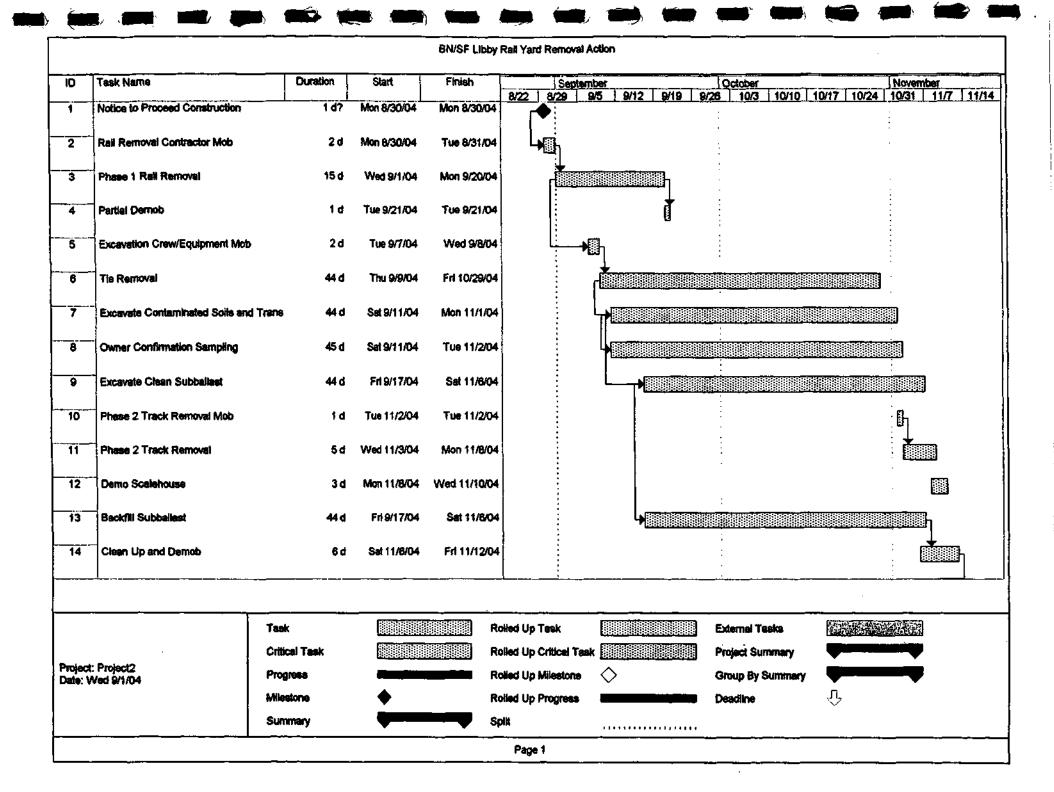
4381 Highway 2 West PO Box 649 Libby, MT 59923 TEL (406) 293-8659 FAX (406) 293-45145

# SUBMITTAL/ TRANSMITTAL

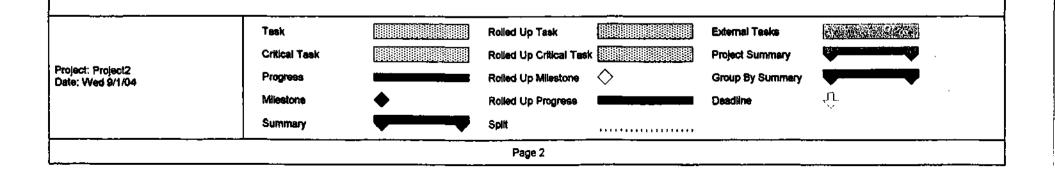
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Date:	9/1/0	)4		Submi	ttal #:	002	
Project	BNSI 2004	Libby Rail Yard Respo	onse Action -	Revisio	on #:		
	Projec	ct No. 14560					
To:	Kenn	edy/Jenks Consultants		Specifi		01300	
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	Feder	al Way, Washington 986	001				
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		K/J Federal Way	1	% L	Reject	ed (re-submittal required)	****

Date

Engineer



				8N/SF Libby	Rall Yard	d Remov	al Action	•									
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Submittal No. 3 (Schedule of Values) was rejected. It was resubmitted as Submittal No. 7, which was accepted.

# Kennedy/Jenks Consultants

32001 32nd Avenue South, Suite 100 Federal Way, WA 98001-9625 253-874-0555 253-952-3435 (Fax) www.KennedyJenks.com

To: Envirocon

4381 Highway 2 West

PO Box 649

Libby, MT

DATE:

10 September 2004

SERIAL NO.: 004

SPEC. REF.: 01300

PROJECT: **BNSF Libby Yard Response** 

Action 2004

K/J JOB NO.:

046022.11

SUBMITTAL NO .:

01300-4

PAGE:

1 of 1

ATTENTION:

*Item* 

Jeff Mikkel

A. The action(s) noted below have been taken on the enclosed drawing(s).

NET = No Exceptions Taken MCN = Make Corrections Noted A&R = Amend and Resubmit RR = Rejected, Resubmit

NR = Not Reviewed

Superintendent Resume

K/J

Refer to Comment Action

No

Manufacturer or Supplier

Not Applicable

Title of Submittal / Drawing

004 **NET** 

Comment: None

Discussion: None

B. Corrections or comments made on the shop drawings during this review do not relieve the contractor from compliance with the requirements of the drawings and specifications. This check is only for review of general conformance with the design concept of the project and general compliance with the information given in the contract documents. The contractor is responsible for: confirming and correlating all quantities and dimensions, selecting fabrication processes and techniques of construction, coordinating its work with that of all other trades, and performing its work in a safe and satisfactory manner.

Dist	SDRL	ENCL.	
Envirocon	Jeff Mikkel	<u> </u>	X
Project Coordinator:	Dick Gugloma	x	x
Construction Manager	Dave Diem	x	×
Resident Engineer:	Brent Sowie	x	x
File		x	x



4381 Highway 2 West PO Box 649 Libby, MT 59923 TEL (406) 293-8659 FAX (406) 293-45145

# SUBMITTAL/ TRANSMITTAL

			TRANSMI'	IIAL		
Date:	9/1/	04		Submi	ittal#: 004	· · · · · · · · · · · · · · · · · · ·
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То:	32001 Feder	nedy/Jenks Consultants I 32 <sup>nd</sup> Avenue South, Sui ral Way, Washington 980 N: Charles Soule		Specifi Section	ication 01300 n/Drawing No.	;
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	) <b>.</b>	NAME	SUBMITI		COMMILITY	
01300	) <b>.</b>				3 copies	

Engineer

TITLE

Safety Supervisor/Construction Superintendent

#### EXPERIENCE

Mr. Vibbert has 12 years experience in construction management in a safety supervisory role, superintendent role, or combination of each. His primary experience is Occupational Health and Safety managing large construction projects and specializing in industrial hygiene, compliance research, Activity Hazard Analysis (AHA) development, and written program and procedure development for occupational hazards in general industry and construction. His experience also includes duel role positions as safety supervisor and superintendent, or solely superintendent roles on several major construction sites.

#### His selected project experience includes:

- Construction superintendent for the demolition of a coke plant in Kemmerer, Wyoming. Scope included
  hazardous materials abatement and demolition services. This included a hazardous materials survey, removal,
  and proper disposal of all hazardous/toxic materials (asbestos, mercury switches, light fixtures/bulbs, cleaning
  supplies, waste oil, lubricants, etc.) remaining on site; removal and proper disposal of all process equipment,
  structures, and buildings to grade level; removal and disposal of all above ground utilities including 5 miles of
  overhead power lines and poles; sump closures; and the excavation and management of on-site disposal cells
  for non-salvageable debris.
- Site Safety Supervisor and construction superintendent for a conversion of 72 miles of railroad into a recreation bicycle and hiking trail in Northern Idaho. The project included the removal and salvage of 64 miles of rail and ties, excavation and transportation to a repository of 110,000 cubic yards of contaminated rail bed material, installation of 59 culverts, erosion repair, riprap construction, precast concrete bridge construction, and backfill of 78,000 cubic yards of structural fill. This included decontaminating over 180,000 railroad ties. The rail bed was ripped, compacted, and reconstructed using over 120,000 cubic yards of crushed gravel. A 53 mile length of trail was paved with asphalt, with the remaining 19 miles being completed with crushed gravel. The work involved coordination with mannerous agencies including EPA. Corps of Engineers, Idaho DEQ, Idaho Department of Parks and Recreation. IDOT, the Coeur d'Alene Indian tribe, and three county governments.
- Site foreman for the residential portion of reclamation work at the Triumph Mine Site in Triumph, Idaho. The
  project involved the regrading and capping two tailings piles, regrading and capping an approximately
  400,000 cubic yard waste rock pile, construction of a geosynthetic-lined pond within the waste rock pile to
  store mine discharge water, and a 30 property residential yard removal.
- Site Safety Supervisor and QA/QC for the grading and stabilization of Class IV residue at a former zinc
  refinery site in Bartlesville, Oklahoma. The refinery produced various metals from the refining of zinc
  concentrates, secondary materials, and other zinc rich materials. The scope of work included the excavation,
  hauling, stabilization, and placement of three types of on-site materials, 68,800 cubic yards of geothite, 39,800
  cubic yards of hot tower precipitate (HTP), and 23,000 cubic yards of contaminated pond sediments. The
  contaminants of concern for the above materials were lead, arsenic, cadmium, and zinc.
- Site Safety Supervisor on multi-year project overseeing employees and subcontractors performing remediation work on a remote copper and cobalt mine. Work consisted of heavy equipment operations removing over 400,000 cubic yards of mine tailings; construction of diversion ditches, pipe installation, two clay-core dams (100' and 160' high) with grout curtains, elaborate drain system through capped tailings, sediment containment ponds, roads and 4500' of concrete creek channels. Duties consisted of: site security, air monitoring, site specific and HAZWOPER training, daily safety meetings, first aid provider on secluded job sites; maintaining all compliance documentation; accident investigations, and traffic control for all main and hanl roads.

#### **BRIAN VIBBERT (Cont.)**

- Site Safety Officer/foreman on a demolition project overseeing asbestos removal operations. Duties consisted of daily
  industrial hygiene surveys for asbestos, employee training, site monitoring, and fit testing respirators.
- Site Safety Officer on a Superfund site overseeing safety and industrial hygiene for the stabilization and removal of 2,500 drums of contaminated waste, 1600' shurry wall installation, and the excavation and remediation of contaminated sludge and wood waste. Duties consisted of: site security, daily air monitoring, performing daily safety meetings, maintaining all compliance documentation, work plan writing and development, purchasing and maintaining all levels of personal protective and safety equipment, fit testing respirators, traffic control, and first aid.
- Site Safety Officer for a major construction company overseeing 80+ union ironworkers for the demolition and
  renovation of an elevated railroad. Work consisted of removing designated track structure, demolition of elevated
  concrete track foundation, replacement of foundation, track, and ties. Primary regulations included Lead exposure
  and fall protection. Duties consisted of employee training, maintaining all compliance documentation; administering
  and tracking medical and Lead monitoring program; fit testing respirators, site and traffic monitoring, on-site
  inspections, air monitoring for employees, and first aid training.
- Safety Consultant responsible for writing and implementation of Corporate Safety and Health programs. Program
  implementation and training material included hazard communication, confined space entry procedures, electrical
  safety programs, bloodborne pathogen programs, record keeping program analysis, respirator protection programs,
  lockout/tagout programs and procedures, and emergency action and fire exit plans.
- Emergency Medical Technician with a volunteer ambulance service responsible for training all volunteers in hazard
  communication, and bloodborne pathogens. This included fit testing HEPA respirators, accounting for all protective
  equipment, maintaining all safety compliance documentation, and oversecing safety on all vehicle accidents, rescues,
  and fires.

#### **EDUCATION**

B.S., Occupational Safety and Industrial Hygiene, Millersville University

#### TRAINING/CERTIFICATIONS

40-Hour Hazardous Waste Operations Training
32-Hour Asbestos Worker
8-Hour Hazardous Waste Operations Supervisors' Training
30-Hour Construction Safety
National Registered Emergency Medical Technician
Radiation Worker Level II Training

#### Address

Libby Home Address-

Two Bit Trailer Park, Highway 2 West

Cell Phone- 406-546-9551

Submittal No. 5 (Type 2 Subballast gradation) was rejected. It was resubmitted as Submittal No. 6, which was accepted.

#### **Kennedy/Jenks Consultants**

32001 32nd Avenue South, Suite 100 Federal Way, WA 98001-9625 253-874-0555 253-952-3435 (Fax) www.KennedyJenks.com

To: Envirocon

4381 Highway 2 West

PO Box 649 Libby, MT 59923 22 September 2004

SERIAL NO.: 006

SPEC. REF.: 02302.1.03

PROJECT: **BNSF Libby Yard Response** 

Action 2004

K/J JOB NO.:

046022.11

SUBMITTAL NO.:

02302-2

PAGE: 1 of 1

ATTENTION:

ltem

006

The action(s) noted below have been taken on the enclosed drawing(s).

No

NET = No Exceptions Taken. MCN = Make Corrections Noted A&R = Amend and Resubmit RR = Rejected, Resubmit

NR = Not Reviewed

Type 2 subballast gradation

**K/J** Refer to

Action

**NET** 

Jeff Mikkel

Comment Manufacturer or Supplier

Remp Sand and Gravel

Title of Submittal / Drawing

Comment: None

Discussion: None

B. Corrections or comments made on the shop drawings during this review do not relieve the contractor from compliance with the requirements of the drawings and specifications. This check is only for review of general conformance with the design concept of the project and general compliance with the information given in the contract documents. The contractor is responsible for: confirming and correlating all quantities and dimensions, selecting fabrication processes and techniques of construction, coordinating its work with that of all other trades, and performing its work in a safe and satisfactory manner.

Dist	RIBUTION	SDRL	ENCL.
Envirocon	Jeff Mikkel	x	x
Project Coordinator:	Dick Guglomo	x	x
Construction Manager	Dave Diem	x	x
Resident Engineer:	Brent Sowle	x	X
File		x	x



: Order

100

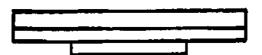
4381 Highway 2 West PO Box 649 Libby, MT 59923 TEL (406) 293-8659 FAX (406) 293-45145

RECEIVED SEP 2 1 2004 K/J Federal Way

#### SUBMITTAL/ TRANSMITTAL.

			11011 101111				
Date:	9/1/0	)4	<u> </u>	Submit	tal #:	006	
Project:	BNSI 2004	<sup>7</sup> Libby Rail Yard Respo	nse Action -	Revisio	n #:	1	
	Proje	ct No. 14560		<u> </u>			
То:	32001	edy/Jenks Consultants 32 <sup>nd</sup> Avenue South, Suital al Way, Washington 980		Specific Section	cation n/Drawing No.	023021.03.	
		N: Charles Soule					
				Subject	<b>E</b>		
We are s	ending	via: X Hand Deliv	ery o Mail	C	Federal Express	o UPS	
			o Enclosed	0	Separately		
			DESCRIPTIC SUBMITT				
01300		Earthwork	Type 2 subballast g	radation	Remp Sand & Grav	rel - # copies	
Enviroco	п Керп	esentative_GHWW	, , , , , , , , , , , , , , , , , , ,	TitleP	roject Manager  Action	Talaa	
	<b>SHO</b> 8. d. <i>OO</i>	P DRAWING REV	/IEW	*** C	~~~~~~~~~~~~~~~~~~~~~~~~~~~~~~~~~~~~~~	proved As Submitted	
A	no excep Make cor Ko resub	Provisions of Project Plans and S FIGNS TAKEN AMENDS	RESUBINT D RESUBINT	] 	note	oroved As Noted (see es/exceptions)  (re-submittal required)  Date	
Er.		Dote 1/2	<del></del>	₩ B <sub>1</sub>	Engineer	Date	

## GRADATION SIEVE ANALYSIS



Job # REMP SAND & GRAVEL
TESTING REQUIRED ON SAMPLE T11 STET

PROJECT: Mª CRUSHED

DATE: 9.18.04

INSPECTO DAK

SAMPLE GROSS WT., WET (gm) SAMPLE GROSS WT., DRY (gm) CONTAINER TARE WEIGHT (gm)

7050.0 7050.0 658.0

SAMPLE % MOISTURE .....

0.0

HET WEIGHT SAMPLE (pm)

714 27 8445 A

% SAMPLE PASSING MOD

10.4

	表					·		
selve size	1"	34"	1/2	3/8/	1/4	4	100	#10
weight ratained	0.6	0.0	0.0	1708.0	0.0	1267.0	0.0	0.0
percert rateined	0.0	0.0	0.0	28.7	0.0	20.1	0.0	οĎ
percent passing	100.0	100.0	100.0	73.3	73.3	63.2	63.2	332
epecifi- cation	NA							

44/44 9/34	814	230	F40	450	Weo T		#100	6200
weight	1561.0	0.0	0.0	0.0	0.0	0.0	1170.0	200.0
retained	<u> </u>							
percent	\$1.3	0.0	9	0	Q	0	16.4	11
retained	Space.			1		- 1		***
percent	31.0	31.9	31.0	31.9	51.0	31.0	13.6	L-10.4
pessing			<del> </del>					
specti-	INA T	i	i					
cetion	<u> </u>				1			

#### Kennedy/Jenks Consultants

32001 32nd Avenue South, Suite 100 Federal Way, WA 98001-9625 253-874-0555 253-952-3435 (Fax) www.KennedyJenks.com

To: Envirocon

4381 Highway 2 West

PO Box 649 Libby, MT

29 September 2004 DATE:

SERIAL NO.: 007

SPEC. REF .: 02302.1.03

PROJECT: BNSF Libby Yard Response

Action 2004

K/J JOB NO.:

046022.11 SUBMITTAL NO.: 01300-5

> PAGE: 1 of 1

**ATTENTION:** 

007

Jeff Mikkel

A. The action(s) noted below have been taken on the enclosed drawing(s).

NET = No Exceptions Taken MCN = Make Corrections Noted

No

A&R = Amend and Resubmit RR = Rejected, Resubmit

NR = Not Reviewed

KJ Refer to Action *Item* 

NET

Manufacturer or Supplier Comment

Title of Submittal / Drawing

Not Applicable Envirocon Schedule of Values

Comment: None

Discussion: None

B. Corrections or comments made on the shop drawings during this review do not relieve the contractor from compliance with the requirements of the drawings and specifications. This check is only for review of general conformance with the design concept of the project and general compliance with the information given in the contract documents. The contractor is responsible for: confirming and correlating all quantities and dimensions, selecting fabrication processes and techniques of construction, coordinating its work with that of all other trades, and performing its work in a safe and satisfactory manner.

Dist	RIBUTION	SDRL	ENCL
Envirocon	Jeff Mildret		X
Project Coordinator:	Dick Guglomo	x	x
Construction Manager	Dave Diem	x	x
Resident Engineer:	Brent Sowle	x	x
File		x	×

## **ENVIROCON**

4381 Highway 2 West PO Box 649 Libby, MT 59923 TEL (406) 293-2727 FAX (406) 293-2729 RECEIVED
SEP 21 2004
K/J Federal Way

### SUBMITTAL/ TRANSMITTAL

			IKA	NOMITIAL			
Date:	9/20,	/04		Submi	ttal #:	007	
Project	BNSI 2004	F Libby Rail Yard Re	esponse Actio	on - Revisio	on #:	1	
	Proje	ct No. 14560				. <u>.</u>	<u></u>
То:	32001 Feder	edy/Jenks Consultant 32 <sup>nd</sup> Avenue South, ral Way, Washington N: Charles Soule	, Suite 100	1 4	ication n/Drawing No.	01300	
	VIII	N: Charles Soule	·····	Subjec	t		
We are s	ending	g via: X Hand D	o Enclo		Federal Expres  Separately	SS 0	UPS
SECTI NO		SPECIFICATIO NAME		RIPTION OF BMITTAL	co	MMENTS	<del></del>
01300		Submittals	Schedule	of Values	3 copies		
				· · · · · · · · · · · · · · · · · · ·			
<u></u>	SHO	P DRAWING 27 No. 64 01300 ACTION	REVIEW			n Taken	
A	MAKE COR	THONS TAKEN	MEND & RESUBMIT ELECTED RESUBMIT Bultants		no no	oproved As Noted tes/exceptions) d (re-submittal requ	` {
	v			∰ B <sub>y</sub>	Engineer	Date	****

#### ENVIROCON, INC SCHEDULE OF VALUES BNSF LIBBY RAIL YARD RESPONSE ACTION - 2004

Burlington Northern & Santa Fe Railway Company Attn: Dave Smitth 139 North Last Chance Gulch Belena, MT 59661

Engineer Approval

INVOICE #: DATE; ENVOICED THROUGH;

						UNITS COMPLETED			TOTAL COMPLETED		TED	BALANCE	
SOV	DESCRIPTION	CONTRACT	CONTRACT	CONTRACT		THIS	PRIOR	10	THIS	PRIOR	TO		~ то
THEM &	OF WORK	AMOUNT	UNIT PRICE	UNITS	UNIT	INVOICE	PERIOD	DATE	INVOICE	PERFORS	DATE	%	COMPLETE
A1.	MOBILIZIZATION & DEMOBILIZATION	\$25,306.00	\$25,300,00	t	LS								\$25,388,00
AL	HAZWOPPER TRAINING	\$1,00	\$1.00		LS								\$1.00
A.	P HEALTH AND SAFETY	\$13,500.00	\$13,500.00	1	LS								\$13,500.00
A.	TRACK REMOVAL	-\$1,540.00	-\$0,11	14,000	SF								-\$1,540.00
A	6 ORANGE BARRIER FENCE INSTALLED	\$6,390,00	\$1,42	4,500	LF	•				1			\$6,390.00
A	7 CONNECTION TO EXISTING FIRE HYDRANT	\$1,705,00	\$1,705.00	1	LS					i			\$1,705.00
A	# PPE SIGN	\$170,00	\$170.00	1	EΑ								\$170,00
A	P RESET TREADS DECON PAD	\$2,272.00	\$2,272,00	) 1	LS								\$2,272.00
В	MOBILIZIZATION & DEMOBILIZATION & INSURANCE	\$88,600.00	\$88,600.00	1	LS					1			\$88,600.00
₿	2 HEALTH AND SAFETY	\$76,650,00	\$76,650,00	1	LS				l				\$76,650,00
Ð	3 DECON PAD CONSTRUCTION & DEMO	\$15,880.00	\$15,880.00	1	LS				,	1			\$15,880.00
В	4 PLACE GEOTEXTILE PABRIC	\$9,450.00	\$8,03	315,000	SF				l l	1			\$9,450.00
9	5 REMOVE TIES WITHOUT WASHING AND LOAD	\$62,550,00	\$6,95	9,000	EA								\$62,550.00
В	6 REMOVE TIES, WASH AND STORE	\$70,650.00	\$7,85	9,000	EA				1	į.			\$70,650.00
В	7 EXCAVATE & DISPOSE OF CONTAMINATED SOIL	\$169,400.00	\$12,10	14,000	TONS					!			\$169,400.00
B74	A EXCAVATE & DISPOSE OF CLEAN SOIL	\$95,400.00	\$5.30	18,000	TONS					1			\$95,400.00
Ð	8 PLACE CLEAN IMPROT SUBBALLAST	\$48,000,00	\$3,20	15,000	TONS				)	1			\$48,000.00
B9.	A ORANGE BARRIER FENCE INSTALLED	\$3,040.00	\$1.90	1,600	LF								\$3,040,00
<b>B</b> 9	B REMOVE ORANGE SAFETY FENCE	00.891,12	\$0.36	5 6,100	LF								\$2,196.00
B1	0 DEMOLISH TRACK SCALE AND HOUSE	\$14,500.00	\$14,500.00	) l	LS				1	i			\$14,500.00
Bi	1 DISPOSE OF CONTRACTOR SUPPILED ITEMS AND PPE	\$620,00	\$620,00	) (	LS					į.			\$620.00
Bi	2 OVERFLOW PIT AT THE DECONTAMINATION PAD	\$1,856,00	\$1,856,00	) 1	LŜ				!				\$1,856.00
D	HYDROSEEDING	\$1,500.00	\$0.00	5 25,000	SF								\$1,500.00
Ė	2 DEDUCT FOR AWARD SHEDULE A AND B	-\$50,00	-\$50.00	<b>o</b> 1	LS				1				-\$50.00
Σ	3 REMOVE CLEAN SUITABLE SUBGRADE SOIL TO LCL	\$5.30	\$5.3	O 1	TONS				ì	1			\$5.30
Í	S SILTATION FENCE	\$3,41	\$3.4	1	LF								\$3.41
	TOTAL	\$708,048.71	l										\$708,048,71

Date

### Appendix F

Documentation of Material Taken to Asbestos Cell at Lincoln County Landfill

TABLE F-1

Summary of Soil Hauled to Asbestos Cell

Lincoln County Landfill

BNSF Libby Yard Response Action 2004

Week	Weekly Tons	Weekly Cu. Yards
9/6/2004	NA	4.00
9/13/2004	1,018.38	636.49
9/20/2004	2,833.79	1,771.12
9/27/2004	3,032.74	1,895.46
10/4/2004	675.49	422.18
10/11/2004	3,594.03	2,246.27
10/18/2004	1,704.95	1,065.59
Total	12,859.38	8,041.11

TABLE F-2

Solf Hauled to Asbestos Cell at Lincoln County Landfill

BNSF Libby Yard Response Action 2004

Weeks of 6 September and 13 September 2004

	Soli Hauf Information										
Date	Ticket#	Tare	Gross	Net	Tons	ÇY					
9/9/2004	NA NA	NA	NA	NA	Estimate	4.00					
	_					··					
Mark of C	Cantamber	. I had b	tend as their		MA I	4 00					

Date	Ticket#	Tare	Gross	Net	Tons	CY
9/15/2004	1008	27080	42540	15460	7.73	4.83
9/15/2004	1007	27080	47520	20440	10.22	6.39
9/15/2004	1010	24020	43480	19440	9.72	6.08
9/15/2004	1011	22680	45660	22980	11,40	7,18
9/15/2004	1013	26960	48360	21400	10.7	6.69
9/15/2004	1014	24020	45440	21420	10.71	6,69
9/15/2004	1015	22640	41840	19200	9.8	6.00
9/15/2004	1018	24020	44960	20940	10.47	6.54
9/15/2004	1018	22840	43860	21220	10.81	6.63
9/15/2004	1019	26960	48240	21280	10.84	6.65
9/15/2004	1020	24020	45160	21160	10.58	6.61
9/15/2004	1021	22640	44060	21420	10.71	6,69
9/15/2004	1023	26960	48720	21760	10.68	6.80
9/15/2004	1024	24020	45440	21420	10.71	6.69
9/15/2004	1025	22840	4226D	19640	9.82	6.14
9/15/2004	1028	26720	48560	21840	10.92	6.63
9/15/2004	1027	24020	45340	21320	10,66	6.68
9/15/2004	1029	22640	50560	27920	13.96	8.73
9/15/2004	1030	26720	49400	22680	11.34	7.08
B/15/2004	1031	24020	46500	22540	11.27	7.04
9/15/2004	1032	22640	44400	21760	10.88	6.60
9/15/2004	1033	26720	46000	21280	10.84	6.65
9/15/2004	1034	24020	44800	20760	10.39	8.49
9/15/2004	1036	22640	46040	23400	11,7	7.31
9/15/2004	1037	26720	49220	22500	11.25	7.03
9/15/2004	1038	24020	44660	20840	10.32	8.45
9/15/2004	1039	22840	44240	21600	10.8	8,75
W15/2004	1040	26720	49260	22580	11,28	7.09
	Total e	688620	1288820	600000	300	187.50

Date	Ticket #	Tare	aul Informa Gross	Net	Tons	CY
9/16/2004	1041	22640	44020	21380	10.69	0.66
9/16/2004	1043	24020	43900	19880	9.84	8.21
9/16/2004	1044	25440	40620	15180	7.59	4.74
9/16/2004	1045	22640	46440	23800	11.9	7.44
9/16/2004	1045	24020	44880	20860	10.43	8.52
9/16/2004	1047	25440	40540	15100	7.55	4.72
9/16/2004	1049	22640	44080	21440	10.72	6.70
9/16/2004	1050	24020	4910D	25080	12.54	7.84
0/16/2004	1051	25440	40860	15420	7.71	4.6
9/16/2004	1052	22640	45180	22540	11.27	7.04
9/16/2004	1053	24020	47200	23180	11.59	7.24
9/16/2004	1054	25440	40920	15480	7.74	4.84
9/16/2004	1055	22640	46280	23840	11.82	7.39
9/16/2004	1056	24020	49460	25440	12.72	7.95
9/16/2004	1057	25440	41280	15840	7.92	4.8
9/16/2004	1058	22640	47860	25220	12.61	7.88
9/16/2004	1059	24020	47400	23380	11.69	7.3
9/18/2004	1060	25440	40320	14860	7 44	4.65
9/16/2004	1061	22640	45200	22560	11.28	7.0
9/16/2004	1062	24020	46720	22700	11.35	7.09
9/16/2004	1063	25440	40900	15460	7.73	4.63
9/16/2004	1054	22640	45580	22940	11.47	7.1
9/16/2004	1065	24020	47380	23360	11.68	7.3
9/16/2004	1066	25440	40460	15020	7.51	4.6
9/16/2004	1067	22640	44600	21960	10.98	6.8
9/16/2004	1068	24020	45480	21460	10.73	6.7
9/16/2004	1069	25440	39940	14500	7.25	4.5
9/16/2004	1070	22640	45700	23060	11.53	7.2
9/16/2004	1071	24020	49500	25480	12.74	7.9
9/16/2004	1072	25440	42260	16820	8.41	5.20
9/18/2004	1073	22640	46160	23540	11.77	7.3
9/16/2004	1074	24020	48060	24040	12.02	7.5
9/15/2004	1075	25440	41600	16160	8.08	5.0
9/16/2004	1076	22640	45220	22580	11.29	7.0
9/16/2004	1078	22640	46660	24020	12.01	7.5
9/16/2004	1079	25440	40360	14920	7.48	4.66
9/16/2004	1000	24020	48640	24620	12.31	7.69
9/16/2004	1890 Total •	887840	1650780	24620 762940	12.31 381.47	238

			aul Informa			
Date	Tiçkel #	Tare	Gross	Net	Tons	CY
9/17/2004	1081	22640	45500	22860	11.43	7.14
9/17/2004	1082	24020	48520	24500	12.25	7.66
9/17/2004	1063	22640	46580	23940	11,97	7.46
9/17/2004	1084	24020	50360	26340	13.17	6.23
9/17/2004	1085	22640	44820	22180	11.09	6.93
9/17/2004	1088	24020	47460	23440	11.72	7.33
9/17/2004	1087	22640	44300	21860	10.83	6.77
9/17/2004	1088	24020	48220	24200	12.1	7,56
9/17/2004	1089	22640	43100	20460	10.23	6.39
9/17/2004	1090	24020	45720	21700	10.65	6.78
9/17/2004	1091	22640	44380	21720	10.86	6.70
9/17/2004	1092	24020	48800	24780	12.39	7.74
9/17/2004	1093	22640	43520	20880	10.44	6.53
9/17/2004	1094	24020	45200	21160	10.59	6.62
9/17/2004	1095	22640	45520	22880	11,44	7.19
9/17/2004	1096	24020	48580	22560	11.28	7.05
9/17/2004	1097	22640	47500	24860	12.43	7.77
9/17/2004	1098	24020	46280	24260	12.13	7.58
9/17/2004	1099	25440	41980	18540	8.27	5.17
9/17/2004	1100	22640	50340	27700	13.65	8.60
9/17/2004	1101	24020	48060	24040	12.02	7.51
9/17/2004	1102	25440	42520	17080	8.54	5.34
9/17/2004	1103	22640	50080	27440	13.72	8.56
9/17/2004	1104	24020	48460	24440	12.22	7.84
9/17/2004	1105	25440	41840	18400	8.2	5.13
9/17/2004	1106	22640	44900	22260	11.t3	8.90
9/17/2004	1107	24020	47940	23920	11,98	7.48
9/17/2004	1108	25440	41420	15980	7.99	4.09
9/17/2004	1109	22640	44920	22280	11.14	6.90
9/17/2004	1110	24020	45360	21340	10.67	6.67

Total	708340	1382160	673820	336.91 210.57
Grand Total, We	ek of 13 Septen	rber 2004		1,018.38 636,49

TABLE F-3 Soll Hauled to Asbestos Cell at Lincoln County Landfill BNSF Libby Yard Response Action 2004 Week of 20 September 2004

The column   The			2-0 %	d ladorani	_		$\overline{}$			\$40.14	al Informaci	i de la companya de l		٦, ٦			5-6 10-	d Inform						5.00	al Indonesia						2000	of Interna		-	—
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1	8363604	11()											11 d P								440	P23/2004								1356					4.87
1																																			
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1	9/20/2004																																		
1	4702000	1114														1770		44065	10/20	* 84	6 14		1200	20000	41386	047 <b>08</b>			21,517,000	1363	70840	37240	19406	0.2	5 13
1	1444																																		4.13
1																																			
10   10   10   10   10   10   10   10																																			
Second   19   19   19   19   19   19   19   1	#CONTRACTOR												4.7 4	.76   6	U22/3964			68040				8/23/2004	1310			16830	14		9/24/2004				14800		4.64
Second   Column   C	#707094						6.54																												4.41
Second   S																																			9.04
Column   C																																			
Property   10	9/20/2004						4.01			29440			197 4	76 1				48746	20.720	10 36		±73/2004	1300				7,51				30440				4.44
Proposed 117 1999 4189 2000 11 1999 4189 2000 11 1990 418	9/29/2004																																		0.12
Trigon 110 120 410 210 140 210 140 210 140 210 140 150 210 140 210 140 210 140 140 210 140 140 140 140 140 140 140 140 140 1																																			
## Section   10   10   10   10   10   10   10   1																																			
## Part	9/20/2004								1177			+1340					22570				1.0			24900	41479	(4)28		443							14
1																																			7.83
## Property   177   1989   1989   197   78   1989   1989   197   78   1989   19					23900																														
Part																																			4.23
1989-900-1 139- 800-0 13830 1400-0 138-0 1300 1300 1300 1300 1300 1300 1300 13												15344					22620	42940	20120					24340	47540										1.86
2020004 11-1 2988 4.10 1100 1100 1100 1100 1100 1100 1100	M707004		20040				3.50							.aa   u	72/7004	1251				0.32	4.00					12600			9/74/2004	1384				11 46	7.18
1-12   1-12	<b>670/7994</b>																																		6.97
## 141   \$244   \$475   \$136   \$482   \$136																																			4,79
Progress   1-16   25   25   25   25   25   25   25   2																																			f.11
117 2419 1 2419	0/20/2004					41.85	7.91			20000			7,00 4	44 19	72/2004	1250	20040	35100	14700	7.12	444	B/23/2004		2711/09	41880	15260	7 63	4.71	W247004	1307	24340	4 (040	30700	10.39	6,47
Variable   1.62   2320   2430   2400   12.4   2400   2400   12.4   2400   2400   12.4   2400   240	P.TOCOMA																																		4.34
## 1989   188   2500   2700   120   2700   120   2700   120   2700   120   2700   120   2700   120   2700   120   2700   120   2700   120   2700   120   2700   120   2700   120   2700   120   2700   120   2700   120																															71520				6,62
1967 200-00 1969 1969 1969 200-00 1969 1969 200-00 1969 1969 1969 200-00 1969 1969 200-00 1969 1969 1969 200-00 1969 1969 1969 200-00 1969 1969 1969 1969 1969 1969 1969 19							7.74																												3.44
100   100	9/20/7/994																22529	43300	20440		6.52		1954	29900	41180					1334	35400		13140		1.76
1922 2004 193 5000 1940 738 277	970/2004																																		9.24
## 150   150																																			8.40
1977   1984   22998   4118   28900   12.8   4.00   20.00   1184   2229   2220										37940																									:2
## 190					-																														144
## 1911 399-06 1920 1738 2.38 4,1	9/30/2004		20010	17475	1070			9/21/2004		25420	48340	20770		44 Ju	772/2004	1207				10.79	6.49				\$\$1 <b>99</b>										8,71
\$\\ \begin{array}{cccccccccccccccccccccccccccccccccccc	1007014	1100.	29300	41700	1000	18	4.80			34300																									
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## ACTIONS 1908 34500 1908 44500 1903 4451 1928 1939 172 19350 4470 1910 1938 8.0																																			
REF   1999   1								8/21/2004	1204			19000					15570				6.50			20040			1.00	4.80	9/24/2004			44300	23940		7.44
BOLITOTAL 1289   23920   43900   1170   1100   625   3.72   127000   1275   20000   4100   1275   20000   4100   1275   20000   4100   4280   1275   20000   4100   4280																																			6.49
## PATTORN 1200 1200 1200 1200 1200 1200 1200 120																																			7.70
## 1/2000   1200   2000   2010																																			7.2
## CONTROL   1219   2000   2000   1219   2000   1219   2000   2000   1219   2000   2000   1219   2000   2000   1219   2000   2000   1219   2000   2000   1219   2000   2000   1219   2000   2000   1219   2000   2000   1219   2000   2000   1219   2000   2000   1219   2000   200										25124	49840																								4.81
991/20094 1219 2000 2010 1219 0 200 1219 0 23 349 1770 1210 1210 1210 1210 1210 1210 1210																																			
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991/7004 1216 3250 07206 1200 10 10.00 6.0 1 1202 20320 072004 1212 203200 072004 1212 2032004 1212 2032004 1212 20320 072004 1212 20320 072004 1212 20320 0																													17.17.4	1992		-114		112	
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1977/0994   1222   29530   41-144   9127   10-91   4.75   477														.70																					
90 1/2004 1223 20000 12400 0.4 4.04 973/2004 1354 20040 32140 1420 7.15 0.44 192/2004 1354 20040 32140 1420 7.15 0.44 192/2004 1354 20040 32140 1254 20040																																			
921-27899 1274 23550 23366 171-0 6-92 8.00 923-2500 1235 2950 1235 29500 125 8.25 923-25 923-2500 125 8.25 923-2500 125 8.25 923-2500 125 8.25 923-2500 125 8.25 923-2500 125 8.25 923-2500 125 8.25 923-2500 125 8.25 923-2500 125 8.25 923-2500 125 8.25 923-2500 125 8.25 923-2500 125 8.25 923-2500 125 8.25 923-2500 125 8.25 923-2500 125 8.25 923-2500 125 8.25 923-2500 125 8.25 923-2500 125 8.25 923-2500 125 923-2500 125 925-																																			
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Grows Total for West of 26 September 2004 2,033.79 (1771.47)

TABLE F-4

#### Soil Hauled to Asbestos Celf at Lincoln County Landfill BNSF Libby Yard Response Action 2004 Week of 27 September 2004

		Cart Ith	of Salary	<del></del>					\$40.0		<del></del>					\$ at the	de l'adminis						E of the	A Personal Property lies	¥				_ :		and Indiana.	ED#	=	
Oele	Daket #	1-1	Greet	Priori	1-	CY.	Date 6/21/2004	Time	Terr	Green	Mart	74**	CY	Deta 9/29/2004	Parket 6	Terre	Greet.	Hel	Tons	3	Opto	Tipot eq. a.		Other .			57		Me C		Orașe .	Het	-	CT
9127/7004	1814	30010	20120	17160	9.55	4.37		5478	20940	79400	16491	8.23	6,711		1935	51/60	48484	34520	12.26	T.84	9/20/2004	199	21168	4430	20140	13 17	- 133	10/1/2004	1695	2004Q 22100	34000 40320	13040	4.L3	6.60
4/C1/2004	1414	31540	90440	39139	13.31	6.76 7.30	9/29/2004	1479	747時	##000 ##310	78040 78440	12.00	6.13	9/29/2004	1536	38800	41105	183-40	0 10 10 10	4 04 4 30	843013004 843013004	1,006	20540 25580	49440	72020	11.41	7,13	10/1/2004	1467	2144	4440	18300	1.06	100
9/27/2006	1418	27(4)	423 <b>00</b>	21470 21730	19.61	9.79	9/24/2004 9/21/2004	1486	2110	41740	15506	12 42 7 75	9,04	9/29/2004	1537	16140	41720	\$0040 15400	7,74	12	9/36/2004	1397	12240	41226	20420	10.71	9.39	10/1/2004	1410	29248	39070	12780	6.30	3.50
#121.12mm	1417	20040 20245	41340	16195	7.00	4.77	9/20/2044	1462	23544	4010	37460	11.23	7.62	9/79/2004	1530	35580	47800	17320	11.10	140	9/30/2004	1996	20040	40240	19300	9.63	4.63	10/1/2004	1659	20400	40520	18720	4.56	6.16
WZT/2004	9418 1418	20500 20500	45760	20.00	11.00	7.34	9/26/2004	1483	20946	36700	17710	11.22 1 M	0.56	9292904	1540	22160	48070	26400	13 23	4.37	9/36/2004	1800	22160	49100	27740	13.42	6 31	10/1/7944	1980	20400	25780	14968	7.44	4.60
9/27/2004	1420	20840	38460	15346	7.77	4.00	0-77-7004	1484	24700	49200	19000	17.5	7.01	9/29/2004	1941	20940	41700	20079	40.44	4.51	9/30/2004	1001	79749	39400	11230	4.01	4.12	10/1/2004	1991	20140	33460	14129	7.46	4.63
9/27/2004	1621	24200	46180	21990	10.99	4 10	9/29/2004	1485	221	40000	22906	11,05	7,47	9/79/2004	1542	20806	21100	17000	40	1.12	9/36/2004	1002	25200	49420	23840	11 87	7.44	18/1/2004	1002	22100	47780	20079	42 61	0.01
1/27/2004	9427	77180	48,960	21340	13,97	7.61	8/29/2004	1486	3434	30230	12040	0.12	4.04	929/2464	1543	20240	42700	10020	10 9	8,01	W/UW/2004	1945	20000	47340	26540	43.27	4.70	16/1/2004	1063	20340	<b>37749</b>	11200	E.F.	3,60
8/77/2004	9422	20000	44 730	23100	19,74	1,30	PASSACION.	9497	24684	47744	27100	11.00	8 83	9/29/2004	1544	15500	49344	海7号	11.50	7,41	5/39/2009	1004	37040	31140	17000	. =	4.61	18/1/2004	1004	20000	34100	13360	1.00	4.10
9/27/7004	1424	34340	42340	16186	0.07	6.03	P/2P/2004	1450	200-40	27744	(4100		121	#7±786#	1549	22100	87448	25200	12.86	7.60	9/38/2004	1005	22 (05	41500	\$4400 16700	12.2	1.63	10/1/2004	1005	20048 22168	301.70	9000 21000	4.94 #0.94	3 00
1401/1004	1476	17790	45120	27744	11.77	7.38	P-5-3004	148	24700	81448	27180 21340	13.00	14	925/7964	1746	20040	39748	18500	8,18 10 es	6.73	#139/3004	1904	39240	48180	20000	7.88 18.3	4.93	10/1/2004	1947	27740	43746	13746	6.37	3.90
0-27 (\$100d)	1420	20940	4440	(9649 25740	+ 12 +2.60	4.14 0.05	9/20/2004	1440	22160 26260	47400 47970	10100	12,42	7,89 5,12	9/39/2004 8/39/2004	154F	30200	42926 40400	21720	7.86	740	9/30/2004 9/30/2004	1000	29580 29400	14440	17740	1.63	8 39	10/1/2004	HEE	20000	14130	(7720	1.06	100
9/27/7004	1477	24366 12168	47200	23040	12.69	7.63	9242404	1463	11100	15460	24740	12.14	7.40	9/29/2004	1546	29586	47340	19300	44	6.35	8/30/2004	1600	20540	39749	17400	ũ	1.10	101/2004	1969	70840	33270	12940	0.20	2 #3
9/21/2004 9/21/2004	1420	20446	44200	22144	11,77	7.00	9/24/7004	1000	29948	30000	10000	9.43	1.00	9-29-7094	1944	22100	45640	23480	11.74	7.34	9/30/2004	1016	27100	44620	22342	10.10	0.00	10/1/2004	1670	32190	37940	45700	7.00	4.63
9/77/7004	1430	26246	20740	13.580	4.74	4.22	9/25/2004	1494	24260	\$7900	26346	14.17	111	9/29/2004	1651	70040	19410	MUIO	9.34	6.84	8/20/7004	1004	26240	36496	1774	6.12	3.13	10/1/2004	1971	39340	49400	14 (40)	7.00	4.43
WZ7/2004	1431	15500	44100	21300	11.00	7,21	921200	1000	22100	47900	34900	12.45	7.74	9/29/7004	1552	30494	49040	29740	13.62	7.49	B/3/0/2004	1813	31546	45800	20020	(0.0)	4.20	10/1/2004	1872	30000	30439	4420	4.01	3,01
9/27/200+	1422	20040	31740	17800	1.0	5.86	9/21/2004	1000	20240	40840	14700	1.49	4.49	P-14-3004	1640	25500	44360	10030	#.# <del>*</del>	8.64	9/30/2004	1943	27,000	36330	11439	7,74	4.43	10/1/2004	1873	20040	24240	13400	4.7	4,99
9/27/2004	1433	34285	4544	31186	19.00	6.67	925/2004	1497	7954	49400	12070	11,91	7 44	9/78/2004	1850	76240	42745	16500	0 29	5 HE	8/38/2004	1044	20946	37468	14528	1.79	3,10	10/1/2004	1674	25100	43930	18340	6.17	6/3
w27/2004	1434	27100	4454	277300	11.10	0.90	M242004	1466	20040	37100	10446	0.27	9.14	8/26/2004	1559	22148	40740	26360	12.20	8.31	B/30/2004	1815	231111	49329	14250	8.54	1.45	10/1/2004	1876 1876	39240 33140	20140	22740 12340	(+.25 4.17	2,12
9/27/2004	1435	20000	4244	31788	10.00	9.61	9767804	1499	242	45740	75100 74000	12.59	7 84	9/29/2004 9/29/2004	#65 <b>8</b>	30946	42400 42700	21400 21900	10,73	8.71	9/30/2004	1817	24740 26540	45744	147EF	7,13 10,00	1.40	10/1/2004	167E	20100	47120	31320	10,60	4.04
WZ7/2004	142	36240	47328 48648	21080	4.04 10.E3	6.00 9.50	979/7004	1981	22189 24340	42848	19900	92.4	9,75	9/29/700A	1110	25980	\$7720	21900	16.47		\$/30/200e	1618	20000	29006	14200	9.5	1.00	18/1/2004	1679	20540	30620	17680	4.84	453
9/37/2004 9/37/2004	1437	28380 28840	37940	17000	4.4	130	9/29/2004	1867	20944	47470	21680	10 84	0 73	9/24/25/84	1550	28240	47946	16780	4.34	1.22	9/28/2004	(819	20040	37140	14794	- 11	144	19/1/2004	1979	21440	18046	22440	1173	7.33
8/27/2004	1439	24266	48480	21230	18,61	***	P494004	1903	21500	11214	29410	14 84	121	9297004	1500	32190	49349	27300	(2.49	6.55	9/30/2004	1620	27160	47500	21506	12.74	7 97	19/1/2004	1880	27+44	41700	10040	1.0	1.45
9/27/2004	1440	22160	44340	22390	10.10	0.31	9797004	1994	24240	10420	78560	13.20	0 30	9/79/2004	1501	30040	34724	177mm	4.49	\$ 84	9/30/2004	1671	20240	43440	17400		8.44	18/1/2004	1881	79740	30540	10700	1.15	334
9/27/2004	1441	20060	43940	20780	17,00	7.20	D-21-2004	1505	33169	\$1360	25700	14 0	0.12	9/3-5/2004	4507	20000	423ED	27500	19.20	7.00	4/30/7004	1027	75980	\$84 <b>8</b> 0	20000	14.95	* >*	1844/\$004	1647	70000	43640	ट्रान	11.37	7.11
9/27/7004	1442	20240	17466	18430	0.21	6.13	9/29/2094	1504	200	40048	19106	+ 69	5 97	9/29/7/2004	1103	36540	49300	17068	4.65	1.33	9/30/2004	1023	30000	44370	73320	11.78	7.35	10/4/2004	1843	30940	15340	16440	7.22	4.51
9/77/2004	1843	23660	10000	21400	10.7		8383084	1807	262-	41485	11440	7,73	4 83	9/29/2004	1501	22100	41530	3 200E	17.53	7.43	9/30/7/004	1974	20940	41640 33380	20700	10.78	9.47	10/1/2004	1964 1505	25580 22180	20300 27 100	7820 4840	3.81 2.47	1,54
9/27/2004	1866	70740	19400	17040	0.03	1.59	からいふゆか	1504	20044	43120	22188 32180	11.00	0.03	9/25/2004	1566	2094I) 20840	30540 42340	(7606 21648	0.0 10,27	1 10 1 73	9/30/2004	1625	27100 25244	43548	31228 17608	(9.61	9.50 9.50	10/1/2004	1804	29240	20 100	12020	8.44	4,54
0/27/2004	1446	24240	47 <b>000</b> 43780	21620	19.60	670	9/25/2004 9/25/2004	1816	227年 242年	##330 ##330	20130	12.31	10 93 7,00	9797004	1941	75100	51160	25500	12.78	7 00	2/20/7004	1877	75546	17760	22200	66.1	100	10/1/2004	1967	79400	12400	13000	4.5	4,04
9/27/2004 9/27/2004	1445	27100	44400	23445	10,07	749	979700	1511	26584	18840	21700	16.63	6.77	P2P7904	1500	20048	48960	(9470	841	0.12	9/30/2004	1828	10444	****	272M	13.64	0.53	10/1/2004	1006	20940	37540	16490	65	4,50
9/21/2004	1448	26246	4144	12790	14	oil	979/2004	1513	36240	60500	14766	1.13		3/29/2004	1200	20000	41940	70340	19.43	9.51	9/39/2004	1979	70746	46329	10360	4 44	8 001	10/1/2004	1689	30000	43360	22400	11.29	7.00
BG7/2004	1049	22540	48080	72900	11.25	ras	821/2004		30946	44340	19420	9,71	0.07	0/20/2004	1670	22 100	48140	22100	11.00	7,45	0/38/2004	1830	171 CF	40 200	27048	(3.67	845	10/1/2004	1890	20840	40340	19480	9.7	8.04
9/27/2694	1430	24200	47430	29166	11,50	7.84	PASPAGG1	18(4	23 180	01000	\$0070	10,48	9.04	\$/3\$/2004	1971	26249	17000	14340	0.15	2.07	0/20/2744	1636	20444	****	23840	11.42	7.36	10/1/2004	1001	2424	44960	10-170	8.21	4.74
9/27/7904	1451	22 988	12000	20579	18,39	041	W29/2004	1618	25690	49780	14200	12,1	7.50	2/20/7004	127	25500	30940	25360	12.04	7.81	M30/3004	1632	200-U)	44349	79400	10.2	0.34	10/1/2004	1603	35180	£3.000	22010 22010	14.61	8.74 7.17
4/27/2004	1613	70840	\$7440	10900	0.26	5.10	9575000	1610	56346	49220	10000	6.49	9.91	W79/3004	1673	30949	40050	\$0030	10,01	0.29	9/30/2004	1693	2474F	43420	(0240 22430	8.17 17-41	6.70 7.93	10/1/2004	1934	22140 20400	45100 44740	23946	19.47	7.44
4/27/2004	1083	32000	41780	3400	1931	4.04	145,000	1617	34200 23640	49120 25005	327 <del>44</del>	11.13 7.00	4.30	\$/29/7004 \$/29/7004	1474	20000 23100	44800 52100	73700 78440	14.87	7.25	6/30/7904 8/30/7704	1634 1633	22100	44340	22140	11,00	0.03	1071/2004	1636	20949	20200	10340	8.17	673
IN97/2004	1454 1455	79240 22060	42840 E8140	19920 78980	8.31 16.74	S.10 9.24	9/39/2004 9/21/2004	1619	2114	81979	13444	13.72	7,95	929/2004	1570	2074	41100	14340	7.47	4 87	9/30/2004	1624	20948	17770	16740	8.39	0.24	10/1/2000	1886	26240	42420	19100	9.00	100
9/2 7/2004 9/3 7/2004	1496	24240	44000	22000	11.3	P.OB	921200L		2278	4440	22720	11,38	7.10	3/29/2004	1977	23360	80465	24440	12 44	7.70	9/30/2004	1697	21500	60380	27900	12.5	6.67	10/1/2004	1687	25580	49620	34048	13.02	7.51
M77/780*	1437	22100	13400	21280	19.60	6,64	P/35/2004		24760	<b>M</b> 526	31200	14.40	9.77	6/78/7004	1879	20940	10500	14500	7.25	4.84	8507794	19730	70349	444340	18440	7.22	0.51	10/1/2004	1676	2216	44340	27199	11.49	<b>6.5</b> 3
b/77/7004	145	79040	300	19929	9.51	594	W25/2004		20240	40780	14970	7.20	4.64	9/29/2004	(127)	20100	38740	17440	8.77	6.45	8/30/2004	1626	50000	44630	20020	11.01	7,64	30°L/2006	-	20300	42460	23080	11,64	7.25
9/37/2004	1439	20144	41470	20740	19.37	4.0)	8/28/300¢		2004	33049	+4 100	7.94	4,41	9/29/2004	170	221時	81548	Z71144	14.00	9,10	9/30/2004	1640	22100	42.00	24400	12.3	7.00	1011/2004	1786	20040	37200 62480	142165 242165	B.13	529
9/37/2004	1400	20240	40249	14090	2	***	0.50.5001		221冊	44443	Z2780	11.38	7.42	9/29/2004	1501	36246	40820	14100	7.39 74.3	4.6	9/30/2004 9/30/2004	1841	30940 25300	42376	21300	12,91	6.40 6.67	10/1/2004	1702	21440 25240	43460	17230	Cat	431
9/27/2004	1401	25500	47429	73040	11.42	***	0-20-200±		34340	47540	21140 21940	11.20 10 Ma	7.04	9/29/2004 9/29/2004	1682	30040	64168 40808	21 850 (34 86	iii	631	920/2004	1945	20740	43940	17720	0.40	1.24	18/1/2004	1783	27160	48430	28320	13.18	1.23
9/27/2004 9/27/2004	1462	34300 23100	47300	33046 33186	11.63	7.20	9/78/7004 9/78/7084	1507 1507	21386 2024	36130	11340	5.07	173	926/7964	1584	2000	414	21340	(0.67	667	9/30/2004	1844	2000	411	2240	11.24	TAS	19/1/2004	1704	30000	47100	26300	14.15	0.22
9/77/7004	146	207040	2434	1450	1.76	4.00	9/29/2004	4623	- <del> </del>	24120	HARO	7.94	2.54	B26/7064	1983	27190	10070	26460	14.23	1.00	9/30/2004	1845	22100	4	27700	12.68	633	18/1/2004	4709	20040	30200	17320	4.00	8.41
8/27/2004	1443	7000	40	19740	8.87	0.17	9/20/2004	1429	27100	49480	24.630	12.20	9.20	9/29/2004	1944	26240	37480	17248	6.62	3.51	B/30/2004	1946	200	27040	M140	0.07	6.64	10/1/2004	1700	25500	\$1630	20040	DAT .	4.14
8/27/2004	1000	29249	20100	12500	1,34	3.00	9/19/7004	1000	2420	61200	20140	13.47	8.43	9292794	1507	26540	43160	17586	0.79	6.49	8/30/2004	1847	21440	44044	20500	10.25	0,41	10/1/2004	47 <b>47</b>	26240	41-840	16540	7.40	4.76
9/27/2404	1407	25860	4000	22400	11.7	7.31	9/29/2004		28344	41960	19720	7.86	481	9/29/2004	+648	20040	20120	18569	0.29	6.01	B/30/2004	194	24244	44960	18720	0.34	143	10/1/2004	1784	771@	\$1500	25340	14.47	8.07
8/27/2004	1868	24760	45460	21200	\$0.0	••	8/29/2004	1977	7174	#2540	21400	10.6_	4.76	9/20/2004	(11)	30400	39940	(0140	9.57	0.04	9/30/2004	1630	2210	46 100	23940	11.57	7.44 6.84	10/1/2004	1796	20440	42340	216m)	10.77	17
2/27/2004	1480	37100	46200	345mb	12.07	7.81								9/29/2004	1590	92160 26260	49080 28670	34100	13,48	420	9/36/2004	1851	20200 20244	43740 98180	21800 , 15240	10 MS	4.7%	10/1/2004	-1798	2024		14164	15.15	441
827/2004	ialio	20940	27760	18740	8,17	2.11								9/20/2004	1997	20944	27846	13520	1.47	123	830/2404	1882	734	20000	14320	7.00		ION COM	- 1(1)	4974	47944		17.79	
9/27/2004	1471	20440	42470	21740 12100	19.60 7.00	440								9/29/2004	+393	2000	10530	72940 22940	11.47	7.47	900/7904	1453	2124	39500	12340	4.67	4.17							
9/27/7004 9/27/2004	1473	\$6349 26560	48040	21245	19.63	141								6/20/2004	1994	20000	40700	18800	1 05	9.23	19072004	1884	7000	70200	18460		E.TO							
9/27/2004 9/27/2004	1074	24290	4040	71240 71860	18.50	:51								-		499.0				7-4	41-11													
6/27/2004	1479	20040	37860	1000	1.00	5.02																												
9/27/2004	1478	27 180	4040	2429	12.31	7.00																												
9/27/2004	1477	211a)	47920	21740	10.67																													
_																				4444		Tanto		<b>162070</b> 0		GM.87							226,16	DECT.
	Testaph +	1491340	2000020	1315100	40.00	41639		Termi o	1301700	3301180	11774120	DEP.74	37(34)	1	Total •	4714 (45)	3637140	7,7,250	co se C	410.31		-	1 to a party	A-1100			4-1-1	,		1305240		~~4	2.10	212/41
																												Total	-	411			1,2011	ALL A
																																_		

Table F-5
Soll Haufed to Asbestos Cell at Lincoln County Landfill
BNSF Libby Yard Response Action 2004
Week of 4 October 2004

	Ţ.	Soll H	aul Informa	tion		
Date	Ticket#	Tare	Gross	Net	Tons	CY
10/4/2004	1712	25720	57060	31340	15.67	9.79
10/4/2004	1713	26100	45640	19540	9.77	6,11
10/4/2004	1714	26100	43460	17360	88.8	5.43
10/4/2004	1715	25720	57460	31740	15.87	9.92
10/4/2004	1716	26100	44920	18820	9.41	5.88
10/4/2004	1717	25720	81040	35320	17.66	11,04
10/4/2004	1718	26100	44820	18720	9,36	5.65
10/4/2004	1719	25720	51340	25820	12.81	8.01
10/4/2004	1720	26100	41380	15260	7.63	4,77
10/4/2004	1721	25720	50960	25240	12.62	7.89
10/4/2004	1722	26100	42200	16100	8.05	5.03
10/4/2004	1723	25720	50120	24400	12.2	7.63
10/4/2004	1724	26100	39480	13380	6.69	4,18
10/4/2004	1725	25720	51320	25600	12.8	8.00
10/4/2004	1726	26100	42100	16000	8	5.00
10/4/2004	1727	25720	50480	24760	12.38	7.74
10/4/2004	1728	26100	40620	14520	7.26	4.54
10/4/2004	1729	25720	51060	25340	12.67	7,92
10/4/2004	1730	26100	42180	16080	8.04	5.03

492480 907620 415140 207.57

Total

Total loads = 19

129.73

			laul Informa			
Date	Ticket#	Tare	Gross	Net	Tons	CY
10/8/2004	1873	22200	49820	27620	13.81	8.63
10/8/2004	1874	26260	51060	24800	12.4	7.75
10/8/2004	1875	25100	41840	16740	8.37	5.23
10/8/2004	1876	22200	49340	27140	13.57	8.48
10/8/2004	1877	26260	51340	25080	12.54	7.84
10/8/2004	1878	25100	43180	18080	9.04	5.65
10/8/2004	1879	22200	54380	32180	16.09	10.08
10/8/2004	1880	26260	55760	29500	14.75	9,22
10/8/2004	1881	25100	43160	18060	9.03	5,64
10/8/2004	1882	22200	53540	31340	15.67	9.79
10/8/2004	1883	26260	56960	30700	15.35	9.59
10/8/2004	1884	25100	42200	17100	8.55	5.34
10/8/2004	1885	22200	50980	28780	14.39	8.99
10/8/2004	1886	26260	55440	29180	14.59	9.12
10/8/2004	1687	25100	43420	16320	9.16	5.73
10/8/2004	1888	22200	55080	32880	16.44	10.28
10/8/2004	1889	26260	56660	30400	15.2	9.50
10/8/2004	1890	25100	42520	17420	8.71	5.44
10/8/2004	1891	22200	52500	30300	15.15	9.47
10/6/2004	1892	26260	55340	29080	14.54	9.09
10/8/2004	1893	25100	40980	15680	7.94	4.96
10/8/2004	1894	22200	52240	30040	15.02	9.39
10/8/2004	1895	26260	55820	29360	14.68	9.18
10/8/2004	1896	25100	41840	18740	8.37	5.23
10/8/2004	1897	22200	48440	26240	13.12	8.20
10/8/2004	1898	26260	53860	27600	13.8	8.63
10/8/2004	1899	25100	42480	17380	8.69	5.43
10/8/2004	1900	26260	56780	30520	15.26	9.54
10/8/2004	1901	25100	42420	17320	8.66	5.41
10/8/2004	1902	26260	55540	29280	14.64	9.15
10/8/2004	1903	22200	50380	28180	14.09	8.81
10/8/2004	1904	25100	43880	18780	9.39	5.87
10/8/2004	1905	26260	56000	29740	14.87	9.29
10/8/2004	1906	24920	54500	29580	14.79	9,24
10/8/2004	1907	22200	50740	28540	14.27	8.92
10/8/2004	1908	25100	42000	16900	8.45	5.28
10/8/2004	1909	26260	55320	29060	14.53	9.08

Total

Total loads = 37

292.45

_	207.57 467,92	
Grand Total, Week of 4 October 2004		422.16
Grand Total Loads		56

911700 1847540 935840 467.92

Table F-8 Soll Hauted to Asbestos Cell at Lincoln County Lendfill BNSF Libby Yard Response Action 2004 Week of 11 October 2004

		202.4	Name of Street	_		$\overline{}$			-	d de la company de la comp	_					200	The same	<b>S</b> no		$\overline{}$			A	-						- A-2	of Sections of			$\overline{}$
Date	Time of	Tere	9	Heat	1-0	~	5	Date:		(here)	No.	Tens	67	Dete	The base of		Ores e	Med		CY	Date:	The same	Twe	Oppos	<b>64</b>	Term	ξY	Quite.	The said	1-4	Ores .	- Net	Tana	CY
1971177004	1919	2+234	\$1860	71400	13.6	1.10	10/12/2004	1961	79860	12790	71100	10.34	8.94	10/13/2004	3679	27900	44040	14120	0.00	3.66	10/14/2004	3104	771₩	-	27820	12 81	0.05	10/11/2004	3179	25000	42539	14141	443	5.37
18/11/2004	1811	22144	(00330)	20140	94.87	9.79	10/12/7904		24300	40429	22048	17.82	7 93	10.13/2001	3040	31360	48979	21540	10.77	6.73	10/14/2004	3107	3+110	49744	21370	10 00	0.00	10/15/2004	3176	200-0	475 <b>4</b> 0	31900	10.55	1.64
180 (780)	1912	29446 29446	99628	16100	9.00	9.00	70/72/2004 10/72/2004		27(m) 27940	(97 <b>66</b> 83386	27500 27440	13.70	1.92 1.50	(0/13/2004 (0/13/2004	3041	37100 30400	27×400	30000 14580	19 9 79	9.24 9.61	10/14/2004	3100	27944 27844	#1120 #1120	29340	14.63	114	10/19/2004	3177 3170	22140 20040	43404	32990 32990	H 33	16.21 7.46
19/7 1/2004 10/7 1/2004	1913	75000	44760	163.26	9 10	10	10/12/2004	1945	100	13300	1754B	6.77	140	10/13/2004	3043	25044	\$0770	24780	17.20	7,74	19/14/2004	2110	20440	39290	(1466)	12	231	10/15/2004	3178	2000	49430	18380	6.43	1.0
18/1/2004	4918	24240	DM	20500	14.70	9.24	10/12/2004	1960	27900	40068	19700	2.00	6.10	10/12/2004	1	3+300	\$1600	27300	11 49	0 33	10/14/2004	3111	27189	Ø1420	39040	14.92	9.79	Mr18/2004	2100	29040	50070	200200	15.34	17
19/11/2004	1510	221	58445	34400	17.24	10,16	10/12/2004		24300	66200	11110	15.94	1 70	19713/2004	3001	20684	42270	71340	10.47	6 67	10/14/2004	3117	34340	EQ500	34176	14 🙀	6.79	10115/7004	3181	22100	E8080	30480	10,34	11.40
10/17/2004	1417	29040	-	3473A	19.30	9.00	19/12/2004		27190	23510	31740	16.67	9.70	(0/13/2004	2D+4	22100	41926	20740	43.37	134	10/14/2004	3113	20940	85710	27440	14.82	9.33	10/16/2004	3102	30440	48840	18000	0.00	134
19/01/2004	(91)	50100	39450 44450	18706	9.44	9,83	10/12/2004		21940	43460	35700 17500	12.45	9.43	10/13/7904	304F 3046	25899 25848	42900	29100	6,47	829	10/14/2004	3114 2115	2 MAGO	42600 30100	97648 97328	4.17	5.40 5.41	10/15/2004	3183 3184	20040	40400	14500	1.28	4.53
18/41/2064 18/41/7084	4210	20960 24288	36830	334-0	wi.23	10,14	10/13/2004		70480	37500	H826	631		10/13/7404	304	20100	41720	70448	1942	137	18/14/2004	3116	22180	\$1700	29120	14.71	9.23	1010/2004	3165	22110	23440	20.00	15.07	8,42 18,39
19/11/2004	(92)	22186	Front	34686	17.43	10.00	10/12/2004		34100	85186	35400	12.0	0.00	10/13/2004	2014	34300	57180	33000	15.0	10.31	10/14/2004	3117	24380	\$2740	2110	14 18	4.54	10/15/2004	3100	204	40260	18360	1.00	8 04
10/11/2004	1992	75945	44420	34946	17,48	10.80	POP2/2004		22100	64400	22220	08.31	10.07	(0/12/7004	3051	Z2100	90120	28440	14.22	0.00	15/14/2004	\$110	27940	E5000	23444	14.83	e 27	10/15/2004	8167	2200	43790	17800	49	9.96
10/11/2004	1577	200.00	40409	10020	0.50	0.22	10/12/2004		2784	51740	25120	13 61	0.07	1843/7944	3012	\$ 1000	41140	19140	0.00	0.00	10/14/2004	21 ID	200	45000	17140	<b>0.97</b>	5.01	10/10/2004	2110	2504	(C)(F)	34120	17.00	19.00
10/11/2004	1924	25840 24380	43040	19680	9.64 (7.2)	9.30 10.70	90/12/2004 90/12/2004	1998	2000) 20100	42500 37520	10120	0.31 0.32	6,20	10/12/7004	3053 3054	75949 20480	99149 30130	24300 18340	12,18 0,12	7.00	10/14/2004	3120 3121	270000 271000	37000 51000	10140 21676	949	6.973 9.20	10/15/2004	3160 2750	22100	42105	21220 20700	18,61	10
10/11/2004	1928	22186	81500	29179	(0.00	17.20	10/12/3904		21204	49240	24660	11.49	7.77	10/13/2004	2012	2434	48800	74430	(2.2)	120	10/14/2004	3122	21340	10400	29028	(3.01	4.13	19/19/2004	3191	7345	41940	(500)	7.84	4.80
10/11/2004	1927	25940	1773	31340	15.07	9.79	19/12/2004		22130	67100	75279	(2.0)	7.34	10/13/2004	3839	22100	93340	20120	1531	1.00	18447004	3123	23944	122006	27300	13.86	1.55	10/15/2004	3193	39940	90790	34420	12.41	7.75
10/11/2004	1929	20840	40439	19740	9.97	0,47	10/12/2004	1100	25540	47640	21700	10.85	4.78	90/13/2004	2017	29940	43000	17100	0.35	-	19/14/2004	3124	27940	43940	10020	0.01	6.63	10/15/2004	\$1E)	22100	44040	25440	12.50	9,00
10/71/2004	1920	2000	44300	16246	0.12	6,70	19/12/2004	3000	23040	4000	17949	+20	1.30	10/12/2004	<b>***</b>	25940	<b>69946</b>	3-000	17	40	10/4/2004	9175	20480	42140	21969	10,00	4.77	10/15/2004	3164	2200	40140	14180	7,00	4.43
10/11/2004	1934	24340	60436 63740	38040	1945	11.36	10/13/2004		20000	37849	16760 22260	12,13	8.24	10113/700A	702	31300	11200	201(0) 27440	1344	9.41	1974/7004 B0714/7004	9126 8127	33180 24380	65-U0 527-00	23.340 27.440	18,65	10.41	107197904	3795	34440	124	25400	133	6.26
10/11/2004 18/11/2004	1871	27:30 35040	83380	24920	12.4	1,0	19/12/2004	3002	3+346 23180	41920	71740	13.67	94	10/13/2004	3040 3091	72 180	43330 48400	27420	11.27	101	10/14/2004	3127	2394		27 MAG	13-10 H (40	10.05	10/15/2004	3186 3187	22130 20040	45740 43400	23.700	11.76 4.82	7.34 £44
10/11/2004	1923	79040	48110	18300	0.00	0.00	10/12/2004		27944	0 PD	27900	13.74	0 01	101 3/7004	1042	21841	62790	14070	7.41	4.80	10014/3004	\$125	25000	44140	19180	120	1.51	10/19/2004	3110	255.00	20720	24740	12.29	7.74
10/11/2004	4934	21000	43800	17940	8.83	8.61	1873/2004	3006	2600	45040	47 <b>000</b>	6.00	1.42	(0/13/2004	2049	23946	63444	27920	15.00	8.72	19/14/2004	3170	39434	41230	20340	60.17	4.34	10111/2804	3100	23100	44300	36730	13.16	1.22
1841/2004	1928	24380	49900	25500	12.76	7.00	1972/2004	2004	20000	*****	17769	444	1.34	(0/11/2004	3044	20100	21729	(8440	+32	674	15/14/2004	3131	22100	45000	73026	11.11	7 19	10/16/2004	1300	5000	41200	19320	7.00	4,19
19/11/2004 19/11/2004	1930	27 180 73040	47360 43200	25200	12.63	7.84 0.63	10/12/2004		24360 77160	19655	25500 36660	12:7E	1.07	10/13/2004	3005	34386 23186	60 344 47 849	22420 22420	17.21	0.63	10/14/2004	3132 3188	24380 25860	82140 43580	31 160 17626	04.Mi	251	10/15/2004	2301 2302	23944 23166	47 <u>7230</u> 4 <b>39</b> 46	\$1200 27700	19,64	0.43
19/11/2004	7830	20588	42248	1114	18.73	471	18/12/7904		32040	48429	22180	11.24	100	(9/13/2004	2017	25940	41500	(0900	14	0.(2	10/14/2004	3124	25040	200	26188	13.09	0.10	1013/304	2200	227700	20400	13300	4.79	427
10/1/2004	1739	21040	41500	19400	1.0	9.13	10/12/2004	3010	15940	44748	16780	0.30	147	10/72/7004	3000	27540	C110	27340	13,62	0.01	10/14/2004	2136	20140	30200	18120	9.18	9.73	19/19/2004	1204	1904	G149	200	10,1	0.00
180 1/2004	****	24380	48480	34109	12 05	7.50	10/12/2004		2000	34400	17920	0.50	\$ 60	19/13/2004	3000	20490	31960	31100	13,55	8 77	10/14/2004	2130	22160	\$1800	30428	14.81	0.20	10/16/2004	200	2 Part	43229	19290	1.63	100
191117004	9941	77100	49748	274	13.79	6.61	68/03/3900A		27 ID	46469	3+200 17620	13,14	7.50	19/13/2004	3070	24380	34000	200 20	15.21	2.01	10/14/2004	2137	34300	\$19400	37430	13.31	144							
10/11/2004	1942	20500	\$3100 40144	77100 19500	9,75		90/12/2004 90/12/2004	2013 2014	3000	41450	13100	105	144	10/13/2004	3071 3077	77140 7 <b>778</b> 0	57300 45420	30170	11.06	0.4t	10/14/2004	312E	25940 70440	43330 41036	17470 20200	£71 10.0	431		T-mail	79492	1470200	72230	301.13	234.71
19/11/2004	1944	2 5000	44120	16968	9.41	100	10/12/7/004		2704	31020	21760	12.99	8.13	1873/3984	3073	27940	54800	29900	14.35	140	10/14/7004	2149	24300	Steet)	20420	73.21	0 20						، بنسناسا	*
(8/11/2004	1945	24100	49970	1114	(21)	7 00	60455/100m	3018	24186	41849	24580	13.2%	7 48	10/13/2004	3074	20880	13000	77190	11.00	0.00	90/14/2004	3141	36940	43340	27400	13.7	0.50							
18/11/2004	1940	22100	47900	25780	12.00		10/12/2004		22100	43936	21500	109	9.41	10/12/2004	3079	24360	12040	30+00	11 23	9.53	10/14/7004	3142	22160	14000	37400	10.24	10 15							
10/11/2004	1947	25648 25660	63746 46200	268 <b>09</b> 18330	13.4 U.S.	8.34	18/12/7904	3019 3010	2 (00 cm)	43840 24540	17966		9 67	10/13/2004	3676 3877	22 104 23100	47980 90900	17070 23420	0.51 11.31	\$32 9.84	10/14/2004	2143	76900 20100	43140 43040	17300 27100	11.00	8 30							
10/11/2004	1000	36000	19400	19440	177	100	10/13/2004		299-40	90740	21808	12.0	7,74	10/13/2004	3070	11040	\$4786	20700	14,30	15	10/14/2004	3145	24380	15400	31026	12.57	201							
10111/2004	1010	24300	49640	21200	13 14	1.59	18/12/2004	3021	24380	20000	1100	17 14	6.00	10/13/7004	3014	20484	41149	20040	104	431	10/14/2004	3144	23840	53500	29620	10 01	9.20							
101117084	1991	22100	80220	32000	14.072	8.79	18/12/2004		27+10	\$8020	17940	11.02	4.70	70113/7004	3000	24300	49720	28349	12.67	7,63	IBANT/SOME	3147	ZZ199	E0400	21420	14.31	<b>8 94</b>							
10/11/2004	1943	30100	30000	19060	0.04	5.46	18/12/2004		25000	43440	17480	4.74	1.40	+013/3004	3001	35000	44 1 M	16140	0.07	4.67	1844/2004	5146	23000	44140	16420	9.31	8.02 6.00							
90/11/2004 90/11/2004	1053	33040 25040	4345	20436	14.21	8.84 8.46	18/12/2004		20040 20040	\$8550 62480	26549	6 86 13.27	1 20	#0113/2004 #0113/2004	3063 3063	25046	59048 42848	32100 21000	10.00	10.34	18443004	3149 3190	24280 24280	39700 61380	16820	8,41	130							
10/1 6/2/004	1005	24300	E	20200	14.13	443	1803/2004		24380	62500	25.100	44.59	111	(0/13/2004	2004	22100	57106	31770	15.30	155	19/14/2004	3181	25940	\$7940	25140	13 07	4.07							
10711200	1968	27180	40549	27100	13.00	0.44	16727004		27100	194.00	71500	14.24	4,51	(0113/2004	3045	34300	\$3100	20760	14.30	0.00	10/14/2004	3193	27100	20200	27000	14 64	4.74							
18/11/2004	1967	19440	40636	10540	4.0	9.14	10/12/2004	3620	27000	44544	10000	* 64	6.96	19/13/3084	3069	19900	44940	10300	129	941	(BLITCHUT	3165	25500	44588	10070	9.31	642							
1811/2004	1044	2940 2940	6516D	34779	9.20	9.(3	10/12/2004		30446	37000	14300	6,1	5.0E	10/13/2004	3047	23040 20040	44730	34940 73340	17.47	10 92 F.29	10/14/2004	2154	)(4.00) 14.100	40710) S7470	19439	9 9 1 P\$-62	9,10							
18/11/2800 19/11/2800	1969	24344	41648 53170	18 ŠV) 28740	4.0	4.50	10113/2004 10113/2004		24306	63890 \$0630	7400	12:34	9.26	10/13/2004	3640 3640	72160	61200	70070	16.67	9.07	10/14/7806	3156	770	244	11100	15.00	121							
10/11/2004	1981	27199	64170	32040	440	10.01	10/12/7004	2002	2318	\$1870	270-10	14.42	9.24	10/13/2004	3690	21386	65540	\$1140	19.50	9.74	10114/2004	3167	27110	() (m)	31480	18.74	924							
101117000	1992	200.00	41420	20540	10.27	4.42	00/12/2004		20100	40340	19900	0.75	8 00	10/13/2000	3091	25040	4440	18100	9.25	1.70	10/14/2004	3150	23000	41020	13880	7.93	4,90							
19/1/2004	1063	270-4	-	20720	14.80	**	40/12/2004		20049	\$4900	58.000	14.43	0.03	10/13/2004	2013	34000	61400	39160	12 73	7.50	10/14/2004	312	2/240	54080	29700	14.48	9.3%							
18/11/2004	1965	24168	64460 63630	10 200	6.25 44.62	4.70 0.10	10/13/2004		2018 2018	\$\$5000 46400	20424 27630	1031	117	10/13/3004 10/13/3004	3004	22180	20:960 20:960	19040 20300	16.00	6.20	10/14/2004	3140 3081	27896 2 <b>3</b> 840	270M	18700 20120	4,18 40,E)	5.64 0.16							
19/11/7904	(1963	2214	1100	20750	H B	200	1013/2004		22199	36060	10200	8,1	- 12	10/13/3004	3006	24780	£74e0	33186	10.09	19.34	10/14/2004	2017	2712	83446	31290	(14)	0.77							
10/11/2004	1967	79030	40300	10240	4.00	***	10112/2004		2104	96729	Zier.	14.64	100	70/13/2004	2000	15940	41090	17908	6.05	4.0	18/14/2004	3143	23900	44490	1860	0.29	1,74	``						
10/11/2004	1986	35940	52100	1704	12.00	0.45								1073/2001	3097	27045	-	20720	19.80	10 84	68/14/2004	3194	24540	ED+60	20020	14.51	9-07	``						
9871 1.77FD4	1999	25940	43600	17920		6.80		Teach	137 1440	3722140	246460	41.3 Tr	429,79	10/13/2004	3000	20143 32189	30137	10940	647	LIQ.	90/14/2004 10/14/2004	3163	27540 27540	42340	29400 29300	10.78	0.71							
10"1 1/2004 10"1 1/2004	1976	24300 23100	41034	25644 36299	12,77	7.94 0.63							44	10/13/2004	3000 3100	74760	87500 81640	30330 27300	13.44	9.48 8.63	10/14/7904	\$140 \$167	77 (80	97700 90040	27 AMA	14 AD	11.00							
00F1 1.720Q4	1973	20000	220	14144	0.34	- 664					•		-	10/13/2004	3100	19940	20000	13640	167	4.70	e0/14/2004	3168	25040	46000	20020	1001	0.20							
HBM 1/2004	1973	33940	62000	20000	14.00	0.30								10/13/2004	1102	20444	34500	19700	7.65	4.96	90°14/2004	3100	24380	\$504	1014	16 10	9.50							
1011 1/3004	1974	79000 74300	42039	1700	8.76 14.7	6.49										-	****				10/14/2004	3170	70000	41946 \$3440	2+020 3+509	10.51	10						899.05	PH 26
10/1 (/2004 10/1 (/2004	9976 9976	24300 22180	637(m 63244	294499 31000	14.7	8,10 8,71								,		1224190	21167700	- mirrio	P(4).29	47.8	90/14/2004 90/14/2004	3172	12 (40)	41990	17920	4.20	**						873.24 TM 29	430.76 497.80
100 1(2004	1977	20494	41240	20300	10.00	8.36												1	. بغسنا لسنة		60H 6/2000	1173	250+0 250+0	64309	39430	19.21	12.01						069.25	940.04
10111/2004	1978	25040	67 140	31420	18.01	***															10/14/2004	2174	2000	37260	18400	8.2	\$.13					_	301.63	277.74
1841/2004	1679	2000	44900	10540	4.27	179																												
19/11/2004	reno	24344		22140	19.07	17.44															,	1	1944125		1776/00	945 14	846.54	•	لنخوا ليجرب	Market of S	1 October 2	***	194 D	7246.27
,	Talai	1003140	神中	17510	400.00	412																				- بايجا ليد	•				Great Sale			291

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Table F-7
Soll Haufed to Asbestos Cell at Lincoln County Landfill
BNSF Libby Yard Response Action 2004
Week of 18 October 2004

) parties	That of a	Tare	Grees	Mayl	Tone	CY
10/19/2004	3205	24260	58860	34600	173	10.81
10/16/2004	3207	25940	52480	26540	13.27	6.29
10/18/2004	3208	20520	42580	22160	11,08	6 93
10/18/2004	3209	21980	57700	35740	17 87	11.17
10/16/2004	3210	25200	45020	19620	9.91	4.19
10/16/2004	32(1	24260	56420	32160	18.05	10.05
19/18/2004	3212	25840	\$2440	26500	13 25	9.20
10/18/2004	3213	20520	43000	23360	11.68	7.30
10/18/2004	3214	21960	52320	30360	18,16	9.49
10/18/2004	3215	25200	43380	18180	9.05	5.68
19/18/2004	3216	24280	55(80	30930	13,46	9.00
10/18/2004		25940	63440	27500	13.75	6.5
10/18/2004		20520	40100	20180	10.09	6.31
10/18/2004		21960	59300	37346	18.67	11.67
10/16/2004		23,700	43940	20740	10.37	4.4
10/15/2004		24260	45120	24850	12.43	7,17
10/15/2004		25840	48040	23400	11,7	7.31
10/18/2004	1223	20570	4 (960	21440	10.72	8.70
10/18/2004		21980	59600	37700	44.65	11.70
10/18/2004		25200	44820	15620	0.81	6.1
10/18/2004		24250	31640	27580	13.79	8.6
10/16/2004		25340	55040	29100	14.55	9.01
10/16/2004		20520	40860	20340	10 17	6.30
10/16/2004		21960	83020	31080	15.53	9.7
10/18/2004		25200	44 120	14020	9.48	8.90
10/10/2004		24280	\$1960	27720	13.66	0.60
10/10/2004		20520	43140	22620	11.31	7.07
10/10/2004		24260	53860	79800	14.6	9.2
10/18/2004		25200	44340	19149	9.57	5.M
10/18/2004		25840	53540	27840	13.02	
10/16/2004		21980	51620	23000	14,93	9.3
10/18/2004		20520	40600	20000	60.04	8.2
10/18/2004		24629	59480	31880	13.83	1.2
10/10/2004		25700	45780	20580	10.29	64
10/18/2004		25040	35540	29600	14.6	9.2
				32300		
10/18/2004		21960 20526	54320 43060	22580	44.16 11.28	10.1° 7.00
10/18/2004						
10/18/2004		24200	54400	30140	15.07	9.4
10/18/2004		25200	44240	19040	9.52	5 25
10/15/2004		25940	54280	28340	\$4,17	86
19/18/2004		21960	55620	33660	14.43	10.5
DOV 18/2004		20520	40800	25250	10.14	0.3
10/19/2004		24200	80700	36440	90.22	11,30
10/10/2004		25200	48020	22920	11,49	7.4
10/10/2004		21960	550-40	33680	16.84	10.5
10/10/2004		23040	48000	20060	10 00	4.7
10/10/2004	1529	25200	50960	<del>_ 27 NO</del>	12.6#	1.90
	Total	1110740	2354700	1243960	621.06	100.7

Total leads + 47

		Dirty A	ar informe	dien		
Orte	This of F	Tere	Огоне	Med	Tors	ÇY
10/19/2004	1530	25940	43900	24040	12.02	7.51
10/19/2004	1531	21960	52460	30520	15.26	9.54
10/19/2004	1532	25200	43340	16140	9 07	5 67
10/19/2004	1523	25340	46400	20460	10 23	\$23
10/19/2004	3274	21860	48240	24780	13.14	8.21
10/19/2004	3225	25200	#0200	15000	7.5	4.69
10/19/2004	3276	25940	50460	24540	12.27	7.67
10/19/2004	3221	21960	52240	30260	15,16	3 46
10/19/2004	3220	25200	35490	14200	7,1	4,44
10/18/2004	3229	25840	\$4440	26500	14.25	8.91
10/19/2004	3230	21960	\$4960	33020	18,51	10.32
10/19/2004	3231	25200	42580	17380	6,80	5 43
10/19/2004	32397	25840	55860	29720	14,56	9.28
10/19/2004	1733	21950	51760	29800	14.9	9,31
10/15/2004	3234	25200	43740	16540	9.27	5.79
10/18/2001	3236	23940	54080	28120	14.05	8.79
10/18/2004	3239	21980	48820	26860	13 43	6.39
10/19/2004	3237	25200	43640	10440	9.22	5.76
10/19/2004	3234	25840	555.60	29640	14.82	0.26
10/19/2004	3239	21960	50720	28760	14,38	0.99
10/19/2004	3240	25940	52840	26700	13.25	8.34
10/19/2004	3241	21960	50120	20160	14.06	0.60
10/19/2004	3247	25200	40980	15780	7.69	4.93
10/19/2004	3243	25940	50826	24680	12.44	7.76
10/19/2004	3244	21960	51740	29790	14.69	9.31
10/19/2004	3245	26200	42540	17340	6,67	5.42
	Tetal	632700	1267580	634590	\$17,44	199.46

Tetal	4.	20

		Dirty H	uf Interna	den.		
Dete	Title	1	(Drees	Met	100	CY
10/20/2004	3248	25840	\$50eg	29140	14.57	\$.11
10/20/2004	3247	21960	52760	30820	15 41	9,63
10/20/2004	3248	25200	39660	14460	7.23	4 52
10/20/2004	3249	20520	40800	20280	10,14	6.34
10/20/2004	3250	25940	56820	30860	15.44	2.65
10/20/2004	1700	25200	42560	17360	E-68	5.43
10/20/2004	1791	21960	54320	32360	14L 18	10.14
10/20/2004	1702	20530	42480	21960	10.96	6.66
10/20/2004	1703	25940	55940	30000	15	9.36
10/20/2004	1704	25200	45540	20340	10,17	6.36
10/20/2004	1705	21960	\$3060	31120	15.58	973
10/20/2004	1705	20520	41280	20760	10,30	6 45
10/20/2004	1707	25940	57360	31420	15,71	9.82
10/20/2004	1708	24260	56440	32180	18,00	10 05
10/20/2004	1700	25200	43540	18340	9,17	5.73
10/20/2004	1710	21960	53460	31500	15.73	9.04
10/20/2004	1711	20520	42620	22100	11.08	6.91
10/20/2004	1762	25940	58980	33040	16.52	10.33
10/20/2004	1713	24290	54540	30260	15.14	0.42
10/20/2004	1714	25200	43960	18780	9.39	5.87
10/20/2004	1715	21950	48460	26520	13.28	4.8
10/20/2004	1718	20520	40800	20280	10.14	634
10/20/2004	1717	2040	50760	24820	1241	1.70
10/20/2004	1710	24260	58720	33460	16.23	10.14
10/20/2004	1718	25200	42700	17580	0.79	2.49
10/20/2004	1720	21960	53740	31780	15.00	9.93
10/20/2004	1721	20520	35463	17940	8.67	5.01
10/20/2004	1722	24280	58660	37400	68.2	(0.13
10/20/2004	1723	25200	44760	19560	P 78	8.11
10/20/2004	1724	20520	41100	20520	10.28	6.43
10/20/2004	1725	25945	55620	29680	14.64	9.21
10/20/2004	1726	21980	\$5070	33060	10.53	10.33
10/20/2004	1727	24280	\$5380	31120	12.50	9.7
10/20/2004	1720	25200	45220	20020	10.01	4.7
10/20/2004	1729	20520	43100	22550	11.29	7.00
10/20/2004	1730	15840	58240	12300	181.15	10.0
10/20/2004	1731	21980	62200	40240	20.12	12.5
10/20/2004	1732	24260	53560	29300	14.65	14.34
10/20/2004	1733	25200	44260	19060	9.50	3.90
10/20/2004	1734	20520	41220	20700	10.35	4.0
10/20/7004	1735	25940	\$300	27950	13.63	4.64
10/20/2004	1736	21980	53120	21460	15.50	9.74
10/20/2004		24260	54880	31900	15.3	2.54
10/20/2004	1737 1738	25200	42620	17420	17.J	5.4
10/20/2004	1739	20620	42540	22420	11.21	70
10/20/2004	1740	25840	44780	40840	20 42	12.7
10/20/2004	1741	21980	59960	36020	19.01	11.8
1.0.2.0.4.04	1741	4,100	2000)	7	19.91	(1.00
	Tabel	1108020	2353240	1247220	623 41	209.71
	1400	1 (04020	*******	GH / ZZQ	DC3 41	247.71

Digital .	Ticket #	Tere	Grees	Net	Tana	CY
10/21/2004	1742	25940	55+60	23520	14 76	1 Z
10/21/2004	1743	25200	42300	67100	9 55	5.34
10/21/2004	(744	25940	60340	34400	17.2	10.75
10/31/2004	1745	25200	45250	20060	10.03	9.2
10/21/2004	1748	25540	41220	35260	17,64	11.00
10/21/2004	1747	25200	<b>50 100</b>	24900	12,45	7.70
10/21/2004	1748	25040	56440	30500	15 25	9.53
10/21/2004	1749	25200	43620	18420	9.21	5.79
10/21/2004	1750	25200	36580	11380	5@	3.5
10/21/2004	10372	25940	35560	9620	4.61	3.0
10/21/2004	10373	25206	44220	19020	8.51	5.64
10/21/2004	10374	25340	59580	33040	18.62	#0.6

Total 306040 390980 283040 141.92 04.70

Total loads - 12

	631,60 317,44 623,61 141,82	389.74 199.40 189.76 66.70	
rend Total Week of Ut Ontober 2004	1704.85	1044.01	

Total touds • 47

Grand Total Loads

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## Appendix G

**Documentation of Imported Clean Backfill** 

**TABLE G-1** 

#### Summary of Imported Clean Backfill From Remp Sand and Gravel BNSF Libby Yard Response Action 2004

Week	Weekly Tons	Weekly Cu. Yards
9/27/2004	2063.86	1289.91
10/4/2004	2,833.79	1,771.12
10/11/2004	3,032.74	1,895.46
10/18/2004	5,868.81	3,668.01
10/25/2004	3,814.75	2,384.22
11/1/2004	178.36	111.48
Total	17,792.31	11,120.19

TABLE G-2

#### Summary of Imported Clean Backfill From Remp Sand and Gravel **BNSF Libby Yard Response Action 2004** Week of 27 September 2004

Date	Ticket #	Tare	Gross	Mel	Tons	CY
9/26/2004	1751	24060	58160	34120	17.08	10.68
9/28/2004	1752	24060	58180	34120	17.06	10.55
9/28/2004	1753	24060	55800	31740	15.87	9.92
9/28/2004	1754	24060	57320	33260	16.83	10,30
9/28/2004	1755	24060	56760	32700	10.35	10.22
9/28/2004	1756	24080	56320	32260	16,13	10.08
9/28/2004	1757	24060	54660	30800	15.3	9.56
9/28/2004	1756	24060	<b>5</b> 5060	31000	15.5	9.69
9/28/2004	1759	24060	58000	33940	18.97	10.61
9/26/2004	1760	24060	58120	34060	17.03	10.64
9/28/2004	1781	24060	57720	33660	18.83	10.57
8/26/2004	1762	24050	\$7060	33000	16.5	10.31
9/28/2004	1763	24060	56200	32140	18.07	10.04
8/28/2004	1784	24060	53700	29840	14.62	9.20
9/28/2004	1765	24060	80360	36320	18.15	11.3
9/28/2004	1786	24060	62020	37980	18.96	11.80

Me.		Ticket #	Ture	Gross	Net	Tons	CY
	9/29/2004	1767	24040	58600	34560	17 28	10.50
	9/29/2004	1768	24040	51980	27940	13.97	6.73
	9/29/2004	1769	24040	59780	35740	17.87	11,17
	9/29/2004	1770	24040	59420	35380	17,89	11.00
	9/29/2004	1771	24040	58760	34720	17,38	10.8
	9/29/2004	1772	24040	61180	37140	18.57	11.6
	9/29/2004	1773	24040	60580	36640	18.32	11.45
	9/29/2004	1774	24040	58740	34700	17.35	10.84
	9/29/2004	1775	24040	57760	33720	16.88	10.54
	9/29/2004	1778	24040	57660	33620	16,81	10.51
	9/29/2004	1777	24040	57580	33540	16.77	10,4
	9/29/2004	1778	24040	58700	34720	17.38	10.5
	8/29/2004	1779	24040	59020	34980	17.49	10.9
	9/29/2004	1780	24040	60800	36760	18.38	11.4
	9/29/2004	1781	24040	\$5900	31860	15.93	9.9
	8/28/2004	1782	24040	56780	32740	18.37	10.2
	9/29/2004	1783	24040	58120	34080	17.04	10.6
	9/29/2004	1784	24040	58700	34660	17,33	10.8
	9/29/2004	1785	24040	55400	31360	15,68	9.8
	9/29/2004	1788	24040	59080	35040	17.52	10.9
	8/28/2004	1787	24040	60900	38860	18,43	11,5
	9/29/2004	1788	24040	55220	31180	15.58	9.7
	9/29/2004	1789	24040	57140	33100	16,55	10.3
	8/29/2004	1790	24040	59520	35480	17.74	11.0
	9/29/2004	1791	24040	57940	33900	16.95	10.5
	9/29/2004	1792	24040	59860	35820	17,91	11.1
	9/29/2004	1793	24040	57580	33540	16,77	10.4
	9/29/2004	1794	24040	58280	34220	17,11	10,6
	9/29/2004	1795	24040	\$6560	32520	18.26	10.1
	9/29/2004	1796	24040	57440	33400	18.7	10.4
	9/29/2004	1797	24040	56880	32840	16.42	10.2
	9/29/2004	1796	24040	57940	33900	16,95	10.5
	9/29/2004	1799	24040	59120	35080	17.54	10.9
	9/29/2004	1800	24040	57220	33160	18.59	10,5

Date	Ticket #	Sub-Balta Tare	Gross	Net	Tons	CY
9/30/2004	1801	24040	61040	37000	18.5	11
9/30/2004	1802	24040	58280	34240	17.12	10.
9/30/2004	1803	24040	58320	34280	17.14	10.
9/30/2004	1804	24040	59280	35240	17.62	11.
9/30/2004	1805	24040	60420	35240 36580	18.29	11.
9/30/2004 9/30/2004	1806	24040	58300	34260	17.13	10.
9/30/2004	1807	24040	60380	36340	18 17	10.
9/30/2004	1806		59800	35760		
		24040			17 88	11.
9/30/2004	1809	24040	61620	37580	18.79	11.
9/30/7004	1510	24040	59760	35720	17 86	11.
9/30/2004	1811	24040	58600	34560	17.28	10.
9/30/2004	1812	24040	55500	32760	18.38	10.
9/30/2004	1813	24040	57840	33800	16.9	10
9/30/2004	1814	24040	56300	34340	17.17	10.
9/30/2004	1815	24040	59350	35320	17.66	11.
9/30/2004	1816	24040	53940	29900	14.95	0
9/30/2004	1817	24040	53580	29540	14.77	
9/30/2004	1818	24040	58380	34340	17.17	10.
9/30/2004	1810	24040	52760	28720	14.38	8.
9/30/2004	1820	24040	56800	34760	17.38	10
9/30/2004	1821	24040	57820	33760	10.69	10
9/30/2004	1822	24040	56940	34900	17.45	10.
9/30/2004	1823	24040	60500	38460	18,23	41.
8/30/2004	1824	2404Q	56080	32040	18.02	10
9/30/2004	1825	24040	57280	33240	10.62	10.
9/30/2004	1826	24040	59440	35400	17,7	11.
9/30/2004	1827	24040	59320	35260	17.64	15.
9/30/2004	1020	24040	59100	35060	17.53	10
9/30/2004	1829	24040	55860	31820	15.01	9.
9/30/2004	1830	24040	55320	31280	15.64	9
9/30/2004	1831	24040	58660	34620	17.31	10
9/30/2004	1832	24040	58900	34860	17,43	10
9/30/2004	1033	24040	59420	35380	17.69	11
9/30/2004	1834	24040	59680	35840	17,82	11
9/30/2004	1635	24040	57140	33100	16,55	10
9/30/2004	1836	24040	57920	33880	16.94	10
9/30/2004	1837	24040	60560	36520	18.26	11

Sub-Ballast Havi Information									
Date	Ticket #	Tare	Gross	Net	Tons	ÇY			
10/1/2004	1838	24040	80360	38320	18,16	11.35			
10/1/2004	1839	24040	58700	34660	17.33	10.83			
10/1/2004	1840	24040	58120	34080	17.04	10.65			
10/1/2004	1841	24040	50200	34270	17,11	10.69			
10/1/2004	1842	24040	57400	33360	16.68	10.43			
10/1/2004	1843	24040	50440	36400	10.2	11.38			
10/1/2004	1844	24040	61080	37040	18.52	11.58			
10/1/2004	1845	24040	60240	36200	18.1	11.31			
10/1/2004	1846	24040	60840	36800	16.4	11.50			
10/1/2004	1847	24040	60140	38100	18.05	11.28			
10/1/2004	1848	24040	\$8220	34160	17.09	10.65			
10/1/2004	1849	24040	57740	33700	16,85	10.53			
10/1/2004	1850	24040	63520	29480	19,74	12 34			
10/1/2004	1851	24040	58340	32300	16.15	10.09			
10/1/2004	1852	24040	57520	33460	16.74	10.46			
10/1/2004	1853	24040	\$7700	33660	16.83	10,52			
10/1/2004	1854	24040	56540	32500	16.25	10.16			
10/1/2004	1855	24040	48020	23980	11.99	7,49			
10/1/2004	1656	24040	60700	36550	16.33	11.45			
10/1/2004	1857	24040	60160	36120	16.08	11,29			
10/1/2004	1858	24040	58060	34020	17,01	10.63			
10/1/2004	1859	24040	59320	35280	17.64	11.03			
10/1/2004	1860	24040	57880	33840	16.92	10.58			
10/1/2004	1861	24040	57640	33600	16.8	10,50			
10/1/2004	1862	24040	58620	34580	17.29	10.81			
10/1/2004	1863	24040	58360	32320	16,18	10.10			
10/1/2004	1864	24040	59820	35780	17,89	11,18			
10/1/2004	1865	24040	60420	36360	18,19	11.37			
10/1/2004	1868	24040	57340	33300	18.65	10.41			
10/1/2004	1867	24040	57760	33720	18,88	10.54			
10/1/2004	1668	24040	57320	33280	18.64	10.40			
10/1/2004	1559	24040	56540	32500	10.25	10.15			
10/1/2004	1870	24040	61020	34980	18.49	11.58			
10/1/2004	1871	24040	57200	33160	10.58	10.36			

384960 915460 530520 265,28 165,79

Total = 817360 1976280 1158920 579.48 382,16

889480 2157780 1268300 634.15 398.34

817380 1987340 1169980 584.99 365.82

Grand Total, week of 27 September 2004

2043.84 1289.91

TABLE G-3

#### Summary of Imported Clean Backfill From Remp Sand and Gravel BNSF Libby Yard Response Action 2004 Week of 4 October 2004

			and ferformer			
Onte	Tiefket if	Tere	Gross-	Hel	Tyra	Ç
8/20/2004	1111	20840	36560	18726	7.84	4.91
6/20/2004	(11)	24300	48460	24100	12.04	7,63
8/20/2004	8174	22520	46000	24440	12.22	7.64
8/20/2004	1116	2H360	45700	21340	10,97	4.67
0/20/2004	1117	27500	47960	25400	127	7.94
BF20/2004	1118	20649	38140	17300	4:44	6.41
9/20/2004	1110	24300	49000	35240	12.62	7.69
9/29/2004	1120	27520	46160	26840	12.02	0.01
9/20/2004	1121	20648	38840	17800	**	4.86
9/20/2004	1122	34,360	49100	24740	12.97	7.73
9/20/7004	1123	22526	45180	22960	11.40	7.1a
9/20/2004	1124	20040	367700	17000	8.80	6.58
9/20/2004	1125	24360	46480	22170	11.00	0.91
9/20/2004	1129	22520	46700	24100	12.09	7.55
9/70/2004	1127	20440	36260	16420	7.71	4.82
9/20/2004	1120	24360	46900	22240	11.12	446
928/2004	1129	22520	46720	24200	121	7,95
9/20/2004	1130	28840	34780	13020	0.00	436
9/20/2004	1931	34300	45100	28820	19.41	4.51
W20/2004	1132	22520	45700	22180	11.69	7.34
9/29/2004	1133	20040	34620	13780	4.00	431
W20V2004	4134	34360	4800	34540	12.27	7.67
9/30/7504	1138	22520	46120	22400	113	7.00
929/2004	1139	20940	35220	14380	T.10	420
9/20/2004	1697	24300	4500	22540	11.27	704
9797904	1139	22129	43060	21140	10.67	607
970/2004	1130	20015	22320	12436	0.34	330
920/2004	1940	34360	43840	18500	6.75	9.00
9/20/2004	1140	22520	44100	21489	10,79	9.74
9/30/2004	1042			14645	7.22	اهنة
	1143	\$0000	354 <b>0</b> 0 45000	2(260	10.63	0.64
#/20/2004		34340				
979/2004	1664	22530	47920	25300	12.00	7,91
\$20/200s	1145	20840	36730	15860	7,90	4,05
B/25/2004	1140	24360	47840	23480	11.74	7.34
Br70/2004	(107	22520	48120	25500	12.8	0.00
970/2004	1148	(A)	47300	24760	(2.30	7.74
\$78V2004	1149	20840	30000	19220	7.01	4.79
9/20/2004	1190	24380	40580	24320	12 16	7,40
8/20/2004	(151	2000	40260	10960	14	3.43
Br20/2004	1152	20440	30000	16140	7.68	4,74
\$400,000 A	1163	34300	49700	24400	12.2	7.60
9/20/2004	1154	22520	48120	25000	12.8	0.00
#2020A	1155	20840	37620	16280	4.39	5.34
9202004	1166	24300	44000	1 (10)	7,\$	+=
						لبيين

			_		
Teach-	1008720	1904960	900140	430.07	21129

		End He	of interna				
Data ABURARA	Tiphet F	Two	<u>Oross</u>	Net	Ţ.	CY	Dete
N3113004	1157	24360	87 15D	22500	71.4	7,13	122/20
NZ 1/2004	119	22526	43490	20980	10:48	6.55	9/22/20
21/2004	1(59	20840	37600	16760	6.38	5.24	\$433/\$O
912 N/2004	1160	24360	47180	22020	11,49	7.13	\$72/20
P242004	1081	26520	49300	23760	11,89	7.43	\$12,2720
971/2004	1002	22520	47080	24560	12.25	7 68	M22/20
P21/2004	1163	20040	3634D	15020	751	4 69	9/22/20
M21/2004	1164	29300	42420	13120	6.56	4,10	8/22/20
9/2 1/2004	1465	24300	46340	21988	10 89	6.47	9/22/70
921/2004	1000	22520	45800	23280	11,64	7.28	1/22/20
9/21/2004	1 1487	20040	34240	13400	0.7	4,79	9/72/20
1212004	1 100	30000	30700	1319	4 56	4,91	P/22/20
9212004	1766	25520	48300	22000	11 43	7,94	9/22/20
9/21/3004	1170	24300	49000	24708	12.36	7.72	9/72/70
21/2004	1170	22670	4526	22748	11.37	7 11	P/22/20
9/21/2004	1172	20840	30100	15340	7.67	4.79	9/22/20
9/21/2004	1173	20000	40100	13680	8.54	4.34	WZ2/20
921/2004	£174	36620	49400	23880	11.94	7.48	9/22/20
9/21/2004	1175	24360	49000	21720	10.00	0.79	0/22/20
9/21/2004	1178	22530	4	24340	12.17	7.61	B/22/20
921/2004	1177	20840	30220	15380	7.69	4.61	9/22/20
921/2004	1078	20000	41700	15100	7.56	4.72	₩Z2/20
21/2004	1179	256,20	51700	26160	13.00	6.16	9/22/20
V2 V2004	1180	24360	42900	24540	12.27	7.67	9/22/20
92 V2004	1181	22520	45000	23440	11,72	7,32	9/7/70
971/2004	1140	20040	36180	15340	7,67	4.79	9/22/20
9/21/2004	1953	29900	41100	14500	7.25	4,63	1/22/20
71200	1984	36520	48300	22760	11,39	7.12	97/2
0721/2004	1005	24360	47180	22820	11.41	7.13	9/22/20
9721/2004	115	22520	46500	23380	11,00	7.49	9/22/20
9/21/2004	1107	20140	36748	14900	7.45	4.06	9/22/20
921/2004	1108	39500	40720	14120	106	4,41	972270
921/2004	1199	25520	45260	22760	11.38	7.61	9/22/20
921/2004	1180	24300	46060	21700	10 85	6.76	92220
9/21/2004	1100	20840	36300	15460			9/22/20
9/21/2004	1102	20040	40120	13920	7.73 6 98	4.83	9/22/20
M21/2004	1185	22570	43304	20780	10.35	6 49	P/27/20
9/21/2004	9164 8185	25520		21260	10 03	6 64	\$72/20
921/2004	1186	54360	480,70	21000	10.63	6.77	9/22/70
M) 1(1904	1180 1187	20840	37140	16300	8 15	\$ 09	9/22/20
9/21/2004	61 <b>68</b>	20000	39440	12840	8 42	4.01	9/22/20
9/21/2004		27570	45680	23160	11 50	7,24	8/22/20
921/2004	1100	25620	45240	20720	10 36	6.48	B/23/20
<b>ed</b> ((\$00)	1200	24360	48740	22380	16.19	0.90	P-55/20
92 (2004	1201	20840	35000	14760	738	4.61	9/22/20
971/2004	1202	2000	39700	12400	42	3.80	27270
P21/2004	1203	22520	45460	22940	(147	7 17	9/22/20
931/3001	1304	25420	45120	19600	9.9	0.78	9/22/20
<b>97</b> (1 <b>7</b> 004	1205	24360	44920	20560	10.23	# 43	97277
871/2001	1,200	20840	34000	13100	4 50	4.11	9/22/20
<b>621/2004</b>	1207	50000	36700	12100	6.06	370	972770
Br21/2004	1,320	22137	44200	21742	70 97	4.79	<b>₩</b> 72740
921/2004	(279	255.ZD	45940	20320	10 14	4.38	9/22/20
6/31/2004	1210	24360	43020	10000	0.33	\$ 63	\$122/20
9071178004	1211	20040	34500	1.3860	0.00	4 77	977/70
9/21/2004	1212	20000	39360	12780	139	3.00	9/22/20
921/2004	1213	22520	45340	22940	11 42	7,14	9/22/20
9/11/2004	1214	25620	47030	22100	11.85	691	1/22/20
9/21/2004	1246	24360	45540	21180	(8.40	0.02	1/72/20
971/2004	1210	20840	32440	11800	56	3 63	9/22/20
9/21/2004	1217	20000	39540	12980	14	4 06	9/22/20
N/21/2004	1210	275.20	43486	20000	(0.44	6.55	B/22/20
9/21/2004	1219	25520	42540	17020	851	\$ 32	972270
9/21/2004	1220	24300	42060	18500	6.25	5.78	1
		20840	33620	12780	13	3 60	
9/21/2004	1221						
	1227	22630	44140	21620	10.01	6.76	
9/21/2004 9/21/2004 9/21/2004							

Dete	Tichel F	Tare	out inverse Orose	Nieri	Tem-	CY
<b>№22/2004</b>	1225	20840	34840	\$4 (00	7.65	-74
9/22/2004	1226	24.380	44580	20200	18,1	0.
1/72/2004	1227	25520	44940	19420	9.71	ė.
\$72/2004	1226	22520	41570	19000	D.0	4.
<b>\$</b> 172/2004	1220	20640	35780	14948	7,47	4.5
P72/2004	\$230	24300	44050	79770	9.60	0.1
9/22/2004	1231	25820	46940	21420	10.71	•
B/22/2004	1232	72520	44320	21800	10.0	•
9/22/7004	+233	20840	33740	12900	0.45	4.
9/22/2004	1234	24380	45380	31000	10,5	•
9/22/2004 8/22/2004	1236	25520 22520	48040 42540	20520 20020	90.26 90.01	
9/22/2004	6237	20840	33586	12740	4.37	7
B/22/2004	(230	24360	48945	22580	11 28	7
D/22/2004	1739	26600	39700	13100	4.64	4
9/22/2004	1240	25520	44240	20720	10.30	ũ
WZ2/2064	1241	22520	42100	10500	1.79	ī
9/22/2004	1242	20840	34300	13460	4,73	4.
8/22/2004	1243	24360	44620	20160	10,08	4.
B/22/2004	1244	20000	40300	13780	1.20	4.
8/22/2004	1245	22520	42440	19920	1.14	4.
<b>\$</b> 72/2004	1244	23520	45285	(9760	9 65	6.
9/22/2004	1247	20840	34720	13000	0.04	4.
9/22/2004	1240	24,360	447(0)	20400	10.2	
9/22/2004 9/22/2004	1248	25600	39640	13040	0.52	4.
9/22/2004	1250 1251	27520 20640	42640 33680	201 20 13043	10.00 8 52	4
972/2004	1252	25520	45280	19790	- 9.69	i
9/22/7004	1263	24366	42326	17980	0.00	ě.
9/22/2004	1254	29800	41820	16220	7.61	Ĩ.
9/22/2004	1255	22520	42700	20186	40 GB	ï
9/72/7004	1254	20840	35100	14260	7.13	4.
\$/22/2004	1257	25520	45000	21200	10.64	
1/22/2004	1250	24360	43920	19563	9.78	•
P22/2004	1250	20840	25180	14340	7.17	4.
9/22/2004	1260	29800	39900	13306	4 65	
B/72/2004	1261	22520	43380	20860	10.43	•
9/22/2004 9/22/2004	1262	25520	43700	19190	9.09	
3/22/2004 3/22/2004	1264	24360 20840	45160 39680	20800 15820	10.4	•
9/22/2004	1265	20000	42170	15620	7.76	-
8/22/2004	1286	22520	45680	13000	11,53	7.
8/22/2004	1207	25820	46300	70790	10.30	- î
8/22/2004	1269	24300	45580	11220	10,61	·
9/22/2004	1269	20840	36280	15140	7,72	4.
2/22/2004	1270	20000	404(0)	13860	4.93	4
9/22/2004	8271	12520	4,7600	20140	10.07	4.
\$72272004	1272	22220	44700	19180	F. 100	5.
9/22/2004	1273	24360	43340	18000	1.6	4.
B/22/2004	1274	20840	36360	15570	7,74	4.
97227004	1276 7270	25000	41400	14800	7.4	•
9/22/2004 9/22/2004	1277	22520 25520	43880	21167	20.56 0.00	
9/22/2004	1278	24360	43660	19720	9.00	
922/2004	1279	20640	34480	13348	4.57	- 7
9/22/2004	1280	29800	40480	13000	6.04	4.
9/22/2004	1281	27520	43460	20040	10.47	ũ
9/22/2004	1202	25520	45240	19726	9.00	·
N72/2004	1243	24300	42020	18460	120	ĭ
9/22/2004	1284	20010	34,200	13369	4.00	- 4.
9/22/2004	1285	20000	40620	14070	701	4.3
B/72/7004	125	22520	43460	20940	90.47	
9/22/2004	1207	22520	43300	20780	10.30	

Tetal	1495860	2023743	1127780 102.00	352.43

T-	1628340	2918580	120222	661.61	400.60

	-	77.00		uj interna			
4 41	Q atto 8/23/2004	Theket F	7m+	37080	Her 16240	Tons § 12	CY E Es
0.31	9/23/2004	1789	24300	45800	21240	10.62	6.64
0.07	9/23/2004	1290	25426	439.20	18400	1.2	5.75
6.04	9737004	1291	22526	42940	20320	10 16	6.35
4.67	9/23/2004	1282	70440	13920	13000	6.54	4.09
9.18	9/23/2004	1293	20500	41380	14780	7.39	4,62
10	9/23/2004	1254	24300	47780	23420	11.71	7.12
0.01	9/23/2004	1295	25520	SDORE	\$4540	12.27	7,67
4.00	9/23/2004	1290 1297	22570 20140	45620	23100	11,58	7.22
0.68	973/2004	1298	20000	37820 47520	16980 16920	0.49 0.48	531 8.29
20	9232004	1200	24365	48560	34200	12.0	7,54
390	3/23/2004	1300	75520	406.00	21100	10.54	9,61
700	9/23/2004	1301	22520	43660	21140	10.57	6.61
4.00	0/23/2004	1302	20,940	24050	14120	7.06	441
4.48	9/23/2004	1303	20600	41620	15020	7.51	4.69
6.12	9/23/2004	1304	24300	48D00	22000	11	0.04
4.21	973/2004	1305	25,520	49400	23670	11.94	7 46
4.33	9/23/2004	1300	22520	42946	20420	10.21	4.36
4.31	9/23/2004	1307	25940	34580	43740	0.07	4.72
6.23 6.18	0/23/2504 0/23/2004	1308	24300 34300	41420	14620	7,41	4,63 7,69
4.34	9/23/2004	1309	2552P	47020 45360	27980 19840	14,23	7,00 8,20
130	9723/2004	1311	22528	42760	20240	10.12	6.33
4.08	9/23/2004	1312	2004D	33680	12940	0.42	4.01
20	9/23/2004	1313	24360	47580	23200	9.16	7.25
4 68	B/23/2004	1314	27000	39200	12000	43	314
8.18	9/23/2004	1316	25620	45000	20160	10.08	6.30
6.61	9/23/2004	1318	20640	22940	130,70	6.51	4,07
4.79	9/23/2004	1317	22520	44260	217(0)	10.69	6,60
4.31	D/Z3/2004	1310	24360	47340	22980	11.40	7.10
4.49 0.65	9/23/2004	1319 1320	20000	41000	15260	7.63	4.77
6 11	9/23/2004 9/23/2004	1321	25570 20840	49140 15960	20420 (5120	10 31 7.5 <b>4</b>	4.73
4.40	9/23/2004	1322	22520	43100	20580	10.25	6.43
4 18	973/7904	(323	24380	44740	20380	10 19	0.37
0 52	9/23/2004	1324	28500	41130	H580	7.79	4.54
101	9/23/2004	1325	20840	38020	45180	7.50	4 74
<b>6 50</b>	9/23/2004	1320	25520	45180	19660	9.63	0.14
4.94	9/23/2004	1327	22520	40600	18340	9.17	6 73
4.01	9/23/2004	1328	24380	42780	18420	921	5.78
7.21	B/23/2004	1329	29000	30646	13048	9.52	4.00
4.49	9/23/2004	1330	20840	35180	14340	7.17	4.40
4 63	9/23/2004	1331	25570	45000	20380	10.18	4.37
쏊	9/23/2004	1332	<b>22520</b>	40220 43180	17708	0.05	5.53
437	9/23/2004	1333	24300 2000	43190 43140	19229	8.41 6.27	5 M
5.99	973/2304	1335	20440	39580	14726	1.36	4 80
8.13	973/2004	1339	23530	45740	20220	10.11	42
4.85	973/7004	1337	22520	43820	21300	10 65	1.00
4.63	9/23/2004	1338	24360	44180	19400	9.0	8,19
801	0/27/2004	1270	20000	40047	13440	8.72	4 20
629	9/23/2004	1340	20447	35540	14700	7,15	4.50
6.03	8/23/2004	P\$41	25520	40000	20540	10 27	8 42
4.17	9/23/2004	1342	22520	42248	19730	9.68	6.16
4.34	9/23/2004	1343	24360	43560	(3500	8/8	6.00
4.44	B/73/2084	1344	25000	38,760	(3(6)	800	3.60
• **	9/23/2004	1345	27840 25420	34540 44760	(3700	0.05	4.20
6.77 4.18	9/23/2004 9/23/2004	1347	25420 22520	42620	19760 20100	9.63 10.05	4.02 4.78
4.38	9/23/2004	1348	24360	46260	21900	10.05	8.04
	97372004	1349	20000	20100	12560	6.29	163
40	9/23/2004	1350	20010	34040	13200	6.6	4.13
	0/25/2004	1351	75520	40430	20969	10.44	0.55
_	0/23/2004	1352	22520	41200	(8680	0.54	5.04
_	9/23/2004	1353	24350	44460	20100	10.04	4.21
2.43	B/23/2004	1354	20840	35(0)	14260	7 13	4,44
	B/23/2004	LTRIS	29800	201720	13(20	0.06	4.10
	972372004 972372004	1360	76590 24380	45530	20000 15820	10 0.94	8.25 6.21

			Totale	1399820	<b>3448040</b>	1000120	544.90	340,35
	i	0/24/2004	1013	24360	41740	23400	11.7	7,3
		9/24/2004	1411 1412	76276 22452	47640 48040	22120 23620	11.00	6.01 7.35
9]	-	9/24/2004 9/24/2004	4408 1410	24320	4279	25080 15860	12.53	7.43
ы		9/24/2004 9/24/2004	1407 1408	25520 27520	90340 45340	24820 244 <b>0</b> 0	62.41 92.23	1.70 1 0
		9/24/2004	1406	20000	44 160	17580	0.79	6.41
비		9/24/2004	1405	24340	46300	23940	92 97 91 97	7.41
:		9/24/2004 9/24/2004	1403 1404	25620 27520	46160 46360	22000 24340	11 33 12 17	7.00 7.81
i		9/24/2004	1402	29600	42480	15880	7.04	4 94
,		9/24/2004	1400 1401	22520 24360	45000	21480 21520	10.70	6.71 6.73
1		9/24/2004 9/24/2004	1390	25620	44200	20740	10.37 10.73	0.44 0.71
ij		9/24/2004	1398	30000	38540	12040	6.02	3.N
:		9/24/2004 9/24/2004	1397	27520 24366	43006 41300	20486 16940	19.24 6.47	12
!		9/24/2004	1305	26520	45540	30026	10.01	6.77
ı	- 1	\$r24/2004	1364	25000	3974	12148	6.07	3.71
1		\$/24/2004 9/24/2004	1302	22520 24360	42940 48308	20420 21840	10.21	6.20 0.00
ı١	j	9/24/2004	1391	25520	48708	21140	18.59	6.60
:1		9/24/2004	1390	27600 00363	49449	13849	6.92	4.2
,		9/24/2004 9/24/2004	1368	225.20 24360	45284 45088	22768 20708	19,35	7, 91 6,41
1		9/24/2004	1367	25520	48400	20980	10,44	4.63
ı		9/24/2004 9/24/2004	1305	20600 20600	49000 41640	22300 15040	19,1\$ 7,63	6.81 4.70
		0/24/2004	1304	22130	45480	22960	11,48	7.10
;		9/24/2004	1363	25520	61300	25760	12.80	8.00
1		9/24/2004 9/24/2004	1301 1382	26930 20840	41000 37520	\$44 <b>0</b> 0 (8680	7.24 8.34	4.53 \$.21
		8.3F.200s	1310	24380	48200	23840	11.23	7.45
١		9/24/2004 9/24/2004	1378	20448 22520	38330 48620	17480 24400	0.74 12.05	5.41 7.43
3		9247084	1277	2520	47540	22020	11,01	0.00
		9/24/2004	1376	27000	39340	12740	6.37	3.94
		9/24/2004 9/24/2004	1374 1375	27520 24360	42260 44126	19760	9.67	6.17
P		9/24/2004	1373	20640	35100	14200	7.13	4 44
;		9/24/2004	1372	27520	48200	13620 20700	6 91 10,33	4.33
1		9/24/2004 9/24/2004	1370 1371	24360 25600	45606 40426	21246	10.62	9.64
ı۱		9/24/2004	1369	22520	43300	20794	10,39	0.45
1		9/24/2004 9/24/2004	1367 1368	25620 20640	42120 35446	14808	63 73	6.16 4.56
!		9/24/2004	1366	20000	36870	17220	6.11	3.0
7		9/24/2004	1345	24300	45120	20760	18.30	841
		9/24/2004 9/24/2004	1363 1364	20840 22520	37240 42140	19400-	6.2 6.81	5.13 6.13
9		9/24/2004	1362	25520	44720	19200	9.6	<b>6</b> EX
1		9/24/2004	1361	29000	41700	#4500	7.25	4.53
:1		9/24/2004	1350 1380	22520 24360	44200 44680	21480 20020	10.84	6.74
1		9/24/2004	1358	20840	35780	M (M)	747	4,47

Total 1672010 2012100 1202220 654.167 359.253 Grand Total, Weak of 6 Ortology 2004 1 2022,771 1774.1

TABLE G-4

### Summary of Imported Clean Backfill From Remp Sand and Gravel BNSF Libby Yard Response Action 2004 Week of 11 October 2004

			d informer Greek	Non	Test	~	h	Thefaul of	Sod (4) Tare	(State)		F 694	- 1			faul Informa							ng internat							d Priormet	- n		
21/2004	1414	20940	38120	17(80	0.00	8.37	6/26/2004	1478	20940	39400	(8490	Fony <u>CY</u> 9 Z) 5	州 海	7004 (53		49590	24520	12.26	ÇY 768	9/30/2004	<u>Police F</u> 1595	22100	Qr04+ 49400	Me1 26340	Turns 13.17	CY IZ	0100 10/1/2004	Ticket 6 1665	7 tire 20940	34000	Net 13060	Fens. 6,63	-CY
27/2004	141E	24260	50660	20420	13.21	0.20	6/26/2004	1479	24280	80248	25900	12.99	12 6779			40250	HE340	107	6.04	0/30/2004	1900	20940	40000	19080	9 43		10/1/2004	1658	22100	+0325	16160	9.00	6 68
27/2004	1416	22 (CD)	45780	23424	14,87	7.30	6/26/2004	1480	22160	40000	25840		08 0/29			41160	20360	10,16	4 36	9/30/2004	1507	25500	48400	22020	1141	F.13	10/1/2004	1657	25140	44880	19300	1-45	40
27/2004	1417	2000	42380	21720 15100	10. <b>件</b> 7,65	6.79 4.72	6/28/2064 6/28/2064	1451	26240 25560	41748	1\$500		64 640			41720	15490	7,74	4.04	9/30/2004	1598	20800	41270	20470	10.21	4.54	10/1/2004	1659	24240	39020	12700	4 39	3.₽
27/2004 27/2004	141 <b>0</b> 141 <b>0</b>	36240 25560	41340	23160	11.00	7.24	WZW7004	1462	20040	46048 38700	27460 17760		62    6/39 55    6/39			47900	\$23.50	11.14	4.00	970/7004	1500	20940	40740	19300	9 65	6.03	10(1/2004	1659	20800	40520	19730	9.86	4.1
27/2004	1420	20940	36/80	15540	2.77	6.86	9/29/2004	ни	24,750	49200	25000			7004 154 7004 154		46920	26480 20820	13 Z3 18-41	8 27 8 5 1	9/30/2004 9/30/2004	1600	22160 26240	49400 33466	27740 13220	1342	4.13	10/1/2004	1661	20800 20840	35780 35880	14980 14970	7.48 7.48	4.6
27/2004	1421	24760	44(60	21900	eq.95	4 84	8/28/2004	1465	32150	48080	23900			2004 154		36460	17000	8 53	\$ 52	9/30/2004	1605	75580	49520	23940	16.67	7.48	10/1/2004	1862	2716D	47790	75670	12.01	• • •
7/2004	1422	22160	46500	24340	12,17	7,61	9/28/2004	1484	26240	38280	13040	6.62 4	06 8/29	2004 154		42260	16020	801	\$91	9/30/7/004	1603	20000	47348	26540	13.27	0.29	10/1/2004	1600	26240	37746	11500	575	3
27/2004	1423	20060	44270	22500	11.79	7.36	9/29/2004	1407	265 <b>80</b>	47740	27160			2004 154		48340	23760	11.86	7,43	9/30/2004	1604	20940	38900	1759(0)	1.90	\$ 61	19/1/2004	1054	20900	34180	12180	0.00	4.1
27/2004	1424	20240	42340	16100	100	6.03	#21/2004	1486	20040	37740	16300			2004 1541			25200	12:64	7.90	9/30/2004	1005	Z2100	46550	24400	12.2	7,63	10/1/2004	1669	20840	30430	9680	4.94	3
77/3004 77/2004	1426	25540 27940	491,70 46560	23540 18640	11,77 9 82	7.34 4.14	8/29/2004 8/29/2004	1480 1480	24290 22180	51440 47400	27180 25240			2004 1544 2004 1541		39240	18300	8.15 10.86	0.72	9/30/2004	1006	26240	42000	15780	7.84	4 90	19/1/2004	1000	22(60)	43240	21080	10.54	6.
7/2004	1427	24260	80023	26780	12.00	6.05	8/28/2004	HBI	20240	42020	18380			7004 1541 7004 1541		42520 40400	21720 14180	7.04	4.43	9/30/2004	1607 1808	25500 20800	48180 38046	20000 17248	10.3 U.62	***	10/1/2004	(667	26245 20800	38990	92740	8 37	3 5.
7/2004	1428	22160	47200	25040	(2.52	7.83	8/28/2004	1482	2(54)	49000	24260			2004 1541		42380	16800	8.4	6.25	9/30/2004	1000	20840	30746	17600	6.0	5.35 5.56	10/1/2004	1869	20040	38520 33520	17770 12580	0.00 0.29	3.
7/2004	1429	20000	44200	23540	11,77	7.38	3/25/2004	1493	20946	30000	18860			2004 1550		45840	23460	11,74	2.34	9/39/2004	1810	22160	44620	22360	11,18	600	19/1/2004	1600	22180	37940	15740	7.69	ĩ
7/2004	1430	28240	39740	13800	4.76	4.22	9/29/2004	1434	24290	52900	28340			2004 1551		39620	19690	9.34	8.84	9/30/2004	1877	25740	36480	12240	6.12	2.83	19/1/2004	1671	26240	40400	14 100)	7.00	4.
772004	1431	25500	48080	21300	11.00	7.31	929/2004	1486	22(40)	47000	24900			2004 1853		46040	25240	12.62	7,60	0/30/2004	1612	25580	45500	200/28	18.01	8.26	10/1/2004	1672	20800	30430	9570	4.81	3.
7(2004	1437	27940	32740	17809	8.0	44	8/28/2004	1400	26246	409/0	14700		20 673			44260	18686	0.34	6.64	930/2064	1613	20000	35,120	16520	7,74	4.65	10/1/2004	1673	20946	34340	13400	6.7	•
7/2004 7/2004	1434	24760 22160	45440 44540	21165 22360	10.59 11.18	6.62 6.60	9/29/2004 9/29/2004	1497 14 <b>90</b>	25580 20940	494(8) 37360	23826 16440			2004 1654 2004 1554		42740 48740	16500 26580	9.25 (3.28)	9.16 8.31	9/30/2004	9814	27945 22180	37493	16520	9.76 9.04	5.16	10/1/2004	1674	2550	47070	16340	9.17	
7/2004	1435	22(0) 20(0)	42440	21780	10.00	601	9292004	48	24200	48000	J5100		ad   0/29			42400	21480	0.73	4.71	0/30/2004	1615 1616	25240	4024 <b>8</b> 40500	14250	7.13	4.46	19/1/2004	1676 1678	221(E) 262(40	44948 39588	22780 12340	11,3F 6,17	7
7/7004	14.30	26240	42320	16060	1.04	603	8/28/2004	1600	22160	4860	24800		75 0/29			42700	21900	10.65	204	9/30/2004	1817	25560	45740	20 188	10 06	8.30	19/1/2004	1677	20100	42120	21329	18.00	ï
7/2004	1437	25500	40040	21060	10.43	4.88	#2#2004	6801	26240	42940	10000		10 073			57220	31040	18-02	3.66	9/30/2004	1010	20000	30000	18200	0.1	6.60	10/1/2004	1679	20940	38620	17000	0.04	ī
7/2004	1438	20840	37940	17000	6.8	5 31	9292904	150)	20840	42820	\$1680		70 6729		26240	42940	18700	135	8.22	9/30/2004	1819	200940	37145	16200	0.1	5.06	1007/72004	1679	25500	49040	23409	11.73	5
72004	1430	24780	45460	21220	10.61	9.63	8/28/2004	+603	200	94,200	29640		20 6/29			49546	27740	13.00	6.54	0/20/2004	1400	22160	47860	25500	12.75	7.97	10/1/2004	1680	22100	41200	19049	0.52	6.
7/3004 7/2004	1440	22160 2080	41540 43040	22349 23280	(1.18 11,60	7.28	8/79/2004 8/29/2004	150	24260 22160	61300	29580 29200		30 8/29 13 6/29			38720	17780	44	1.50	9/30/2004	1621	26240	43640	17400	4.7	6.44	10/1/2004	1681	24240	30040	10700	6.35	3
7/2004	1442	25740	42000	18420	4.21	111	8/23/2004	1700	2054D	40040	19100		.13 8/29 97 6/29			43360 43300	22540 17060	11.29 0.53	7.05 5.33	9/30/2004	1622 1623	(155m)	65480 44320	29909 23520	H.96	9.34	10/1/2004	1682	20800	43540	22740	11.37	7.
7/2004	1443	2500	48980	21400	10.7	8.00	8/29/2004	1907	26240	41990	15440		83 9/29			47220	25060	u.	7.63	9/39/2004	1624	20800 20940	41848	20700	11,78 10,36	7.35 6.47	10/1/2004	1683 1684	22940 25440	36380 33208	14443 7820	7.22 3.81	2
72004	1444	20940	36000	17900	4.93	6.50	8/26/2004	1500	20040	43120	22180		6 1/29			38540	17000	ü	5.50	9/30/2004	1625	22180	E3.180	31270	18.01	D.76	10/1/2004	1685	22100	27100	4840	2.47	· ĩ
7/2004	1446	24200	479(0)	23720	§1, <b>6</b> 0	7.41	<b>8282004</b>	1100	22160	\$4320	32160	16.08 10		2004 1550	20000	42346	21540	10.77	0.73	8/30/2004	167	20240	43640	17800	8.0	8.50	(0/1/2004	1688	26240	30160	12929	6.40	4/
/2004	1440	22160	43780	21630	10.01	6.76	9/29/2904	151 <b>0</b>	24260	40000	24620			2004 (58)		61160	25580	12.71	7.00	9/30/2004	1627	26540	67760	12200	18.4	10.06	10/1/2004	1697	20000	23900	13000	4.5	4/
772004	1447	20660	44500	23840	11.82	7.45	879/2004	15(1)	755ep	65940	31260		77 6/29			40580	19620	961	0.13	9/30/2004	(628	20000	48080	27260	13.64	4 63	10/1/2004	1688 1888	20940	37540	10000	8.3	6.1
7/2004 7/2004	1448	26240 25580	41440	15200 22500	7.0 19.25	4,7% 7,03	97972004 97972004	1512 1513	29240 20940	40500 46380	14260 19420			2004 1565 2004 1570		41640 46146	20840	10.42	0,61	9/30/2004	1629	20940	48326	19386	0.00 13.52	9.09	16/1/2004	1869	20800	43340	27500	11.29	7
7/2004	1460	24260	47475	20160	11.4	7.24	9/25/2004	1814	22180	5(980	26920		04 673			42900	23980 16360	11,99 8.18	7.49 8.11	9/30/2004	1630 1631	22160 20800	49290 44440	27040 23640	11.82	2.45 7.39	10/1/2004	1891	20040 26240	40340 446 <b>6</b> 0	18420	9.7	60 60
7/2004	1451	22160	42630	20520	19.25	8.41	6/28/2004	1516	25540	48780	24200			2004 157		60940	75360	12.08	7.63	\$00,7004	1632	20940	41340	20400	10.2	0 33	19/1/2004	1002	25540	\$3000)	20020	14.01	
72004	1452	20940	37440	10500	8.24	6,16	6/26/2004	1018	28240	43220	16060		31 9/20			40980	20020	10,01	626	9/30/2004	1833	26240	44480	18240	8.12	6.70	19/1/2004	1600	22160	45100	22040	11,47	7
7/2004	1453	20000	41200	20420	10,31	4.44	B12B12004	1817	24260	44520	22200		96 6/29			44000	32,700	11.6	7.25	9/30/2004	1834	20800	43670	22626	11,41	7,43	10/1/2004	1694	20000	44740	23040	11.67	7.
7/2004	H	26240	02M60	10020	4,31	6.1D	8/28/2004	1519	20940	35000	14060		39 6/29			62100	29940	14.97	9.38	9/30/2004	1636	Z2160	44348	22100	10,00	860	10/1/2004	1605	20040	30500	BRISHD	0.47	6.
7/2004 7/2004	1455 1456	26580 34380	65140 4000s	29560 2360	14.70 11.3	7.06	8/28/2004 8/28/2004	1819 1820	25580 22180	\$1670 4468D	25440 22720		#5 6/29 10 6/29	72004 (574 72004 (577		4 f 185 50480	14940 24180	747 1244	4,67 7,76	9/30/2004	1630 1837	25940 25680	\$1720 \$3380	19790	13.0 13.0	6.24	10/1/2004	1698 1697	26240	42426	10180	0.01	Æ.
7/2004	1487	22160	43400	21240	10.62	8.84	6/26/2004	(83)	M250	56520	31200			2004 1571 2004 1671		35500	14550	7.28	4.65	930204	1037	25240	40680	27600 16460	1.22	4.61	19/1/2004	1697	25580 22160	49620 44340	24040 22140	12.02	
77000	1458	20040	30000	19020	* 51	8.94	8/25/2004	1612	20240	40700	14620			2004 6575		35240	17440	6.72	8.45	9/30/2004	1638	20800	44620	23620	11.91	7.44	10/1/2004	1898	20,000	43000	2200	11,50	7
/2004	1450	20680	41400	20740	10,37	4.48	8/28/2004	1523	20040	35040	14100		41 0/29			51540	29380	14.00	B-10	9/30/2004	1840	22100	48780	24004	12.3	7.60	10/1/2004	1700	20040	37300	(6260	B. 13	6
7/2004	64 <b>40</b>	500540	40248	(4000	Ť	4.32	8/28/2004	1524	22(40)	44940	22700			2004 1561		40620	(45 <b>E</b> D)	7.20	4.64	4440/2004	3841	20940	42326	21300	10.00	0.44	10/1/2004	1701	25680	62486	20900	12.45	
77004	1001	25540	47920	22040	1102	0.60	6/38/3004	1925	24240	46240	22580		96 8/75 8/75			64 (60	29900	14.3	6.84	9/30/2004	1842	25634	61400	25820	12.01	8.07	10/V2004	1702	28240	43440	17220	0.51	
(2004 12004	1462	24 (M) 22 (80	47340 44340	23046 22180	11.62	7.20 9.93	9/29/2004 9/29/2004	1526	25589 26240	47546 30130	21680 11940		86 8/20 73 9/20			40900 42140	199 <b>2)</b> 21340	6.60 10.67	6.21 6.67	9/30/2004 9/30/2004	1543	20800	43050 43290	17720 22480	0.00 11.24	8.64 7.03	10/4/2004	1703	22160	46480 47100)	26320	12.16	
7/2004	1464	20040	36500	25 (ED	7.78	4.00	N2N2004	4620	20040	36530	15000			7004 (SP		50620	21300	10.07	8.66	9/30/2004	1846	22160	49460	27300	13.65	0.53	19/1/2004 19/1/2004	1704	20900 20940	47 KGD 36260	26306 17329	13.15	
1000	1445	20000	40400	19740	2.07	6,17	9/29/2004	1529	22160	48900	78520		20 020			37480	11240	160	3 61	9/30/2004	1646	20940	37040	10140	4.07	6.94	10°U2004	1796	25580	51620	20048	13.02	
/2004	1486	26240	38026	12000	4.34	3.00	8/28/2004	150	24200	5(200	26940	1347 6	42 6/29	7004 1597		43100	17540	17	5 49	9/30/2004	1847	25580	400	20100	10.25	6.41	10/1/2004	1707	76240	41480	H5240	7.0	- 4
13004	6467	26540	44000	25400	11.7	7.31	¥75¥2004	1531	26240	41000	16730			2004 (596		300,500	18580	1.29	6.01	9/30/3004	1649	25740	44950	18720	136	144	10/1/2004	1708	22180	61500	29346	14.67	0.
7/2004	1459	24200	45440	21700	10.6	443	M29/2004	1622	20840	42940	21880	(80 6	75 6/20			39940	19140	9 57	1.94	970/2004	1650	22160	48 100	23940	11-97	7.40	10/1/2004	1709	20000	42340	21548	10 77	
7/2004 7/2004	1400 1470	22100 20040	46204 37280	24040 16040	12 02 8,17	7.\$1 8.11							_!   673			49060 39470	20500 +3580	13.45 6.76	4.30	9/30/2004 9/30/2004	1849 1851	20600	42700	21900	10.15 7 02	684	30/1/2004	1710	27040	41000	20000	10.03	(0.
7/3004	1471	2060	42420	21780	10.00	6.80							W29			37880	10940	847	120	930/2004	162	20940 25580	38180 38600	15246 14320	7,16	4,76	10/1/2004	1761	15180	57940	22300	19.18	10.
7/2004	1472	26240	40346	14180	7.05	4.41							B/25			48520	22940	11,47	7.17	970/2004	1653	34340	39440	13340	667	4.17							_
7/2004	1473	25980	46920	21240	10 43	4.64							6/29			40700	19000	9.00	6.72	0/30/2004	1854	20000	70/200	19480	9.24	6.70							
7/2004	1474	24240	46340	21080	10.54	49																											
7/2004	1478	20040	37000	16040	103	F05																											
7/2004 7/2004	1476	22160 25534	46760 47320	24420 21748	12,31 10,87	7.00 0.70																											
-204	1471	-	47.420	21748	10.07	0.10																											
		_																															
				1315tm [								_																					

Grand Total, Work of 11 October 2014

TABLE G-8

#### Summary of Imported Clean Backfill From Remp Sand and Gravel BNSF Libby Yard Response Action 2004 Week of 18 October 2004

		o de les	(Naut output	marker .		
Own.	Tighet 8	Ten	Grees	37800	10.0	<u>er</u>
10/10/2004	3453 3454	24040 23520	\$1640 39100	35580	17.70	19.75
10/18/2004	345\$	21060	\$7790	36700	18.36	11,47
(0/19/2004	3454	24048	\$0100	35049	1753	10 98
(0/18/2004	3457	23520	38300	32780	10.39	10 24
10/18/2004	3458	21060	58080	38000	17.6	10 94
10/18/2004	3439	24048	\$0540	38500	17 15	1109
10/18/2004	3460	2352	55700	32180	16.09	10.00
10/18/2004	3461	21060	54,200	33149	10 57	10 30
10/10/2004	3462 3463	24040 23520	60500 \$4840	36460 31320	11L20 15 GB	879
10/16/2004 10/16/2004	3464	21060	63500	32440	(8.22	10.74
19/16/2004	3496	24040	57660	23040	14.62	10.51
10/18/2004	3466	23520	54500	33040	10.52	10.33
10/18/2004	3467	21000	85100	34040	17 02	10,64
10/16/2004	3456	24040	60100	36060	18 (3)	t1.27
10/18/2004	3400	23520	\$5300	31780	15 40	<b>⊕.</b> ⊞3
10/16/2004	3470	\$1000	52420	31360	15 (8)	0.00
10/10/2004	3471	24040	67640	33600 20560	184	10.1D
10/18/2004	3473	21040 21040	90620 90540	25500	14.76 17.75	9 24
10/18/2004	3474	21050	\$4740	13684	16.84	10,63
10/18/2004	3475	24040	50 100	34140	17.67	10.67
10/16/2004	3476	21060	62520	31480	15.73	0.83
10/18/2004	3477	24040	67600	J2660	16,78	1049
10/16/2004	3470	2108)	63300	32320	16.16	10.10
18/18/2004	\$470	24040	\$ <b>8</b> \$300	344ED	17.23	10 77
18/16/2004	3480	\$1000	53260	32280	10.11	10.07
10/16/2004	3481	24040	58330	34280 31860	17.14 16.62	10.71
10/16/2004	3482 3483	21000	\$2700	35420	17.F1	9.69 11,67
10/18/2004	بهدو	21000	69460 52140	32000	18.04	10.00
10/15/2004	3436	21060	62200	36140	15.67	0.73
10/18/2004	3486	31080	400	15540	17,77	11,11
10/16/2004	3487	21000	55000	37940	18.97	10.61
10/16/2004	348	34010	\$25540	31500	15.75	9.84
10/16/2004	3480	21000	\$196D	30300	15 45	900
10/18/2004	3490	\$1010	62640	38600	19.3	12.00
10/16/2004 10/16/2004	3491	21060 24040	67880	36830	16.41 17.49	11,31
10/18/2004	3493	21000	\$9030 61680	30820	15.41	9.63
10/16/2004	3494	24040	\$1200	37180	18.88	11,61
10/10/2004	3496	21080	54800		141.77	10.48
18710/2004	3490	21000	53920	33540 32860	16.43	10.27
10/16/2004	3487	24040	56000	34020	17.01	10.67
10/19/2004	5198	21060	***	34580	17.20	10.91
19/18/2004	494¢ 1621	21000	60480	34520	17.42	10,76
(Q/16/2004 (Q/16/2004	1934	21000 2404	65680 88080	34640	17,20 17,02	19,59
10/18/2004	1538	21000	63679	32000	19.3	16,19
10/19/2004	1537	24046	60620	32580	16.29	10.18
10/18/2004	1530	21860	65845	34780	17,30	10,87
10/18/2804	1538	24848	59400	35760	17.60	11.05
10/16/2004	1540	21040 21040	55760	34700	17.35	10.64
10/16/2004	1541	24040	58800	34760	17.39	10.00
10/11/7004	1542	21000	52866	31820	15.01	0.64
10/16/2004	(\$4) 1544	23520 24040	54960	33449 37420	18.72	10.45
10/18/2004	1545	21080	61440 63260	12200	10.71 16,1	10 05
10/11/2004	1548	23520	55400	31640	15 94	9 99
19/16/2004	1947	24040	62000	38646	10.32	12.00
10/16/2004	1548	21060	\$5030	33940	16.00	10,61
10/19/2004	1549	23520	58420	34.90D)	17,45	16.91
10/11/2004	1550	\$4040	60660	36820	18.41	18,51
19/16/3004	1551	21000	15000	34020	17,01	10 60
10/10/2004	1952	21530	67440	33930 33540	10.94	10.60
10/10/2004	1554	21060	\$7580 54780	33700	14.77	10.49 10.63
1.5.0	1004	2 2000	24,46	*****	(0.00)	
$\overline{}$					_	

		برادة خا	Magai Joshum	me@ne		
000	Ticket		Ores	Ned	Timo	CT -
10/16/2004	1698	23520	6420	31300	13.65	916
10/10/2004	1968	21000	55840	34700	17.30	19,87
10/10/2004	1667	23780	<b>#0460</b>	30000	10 34	11.46
10/16/2004	1558	22520	<b>EAST</b>	33380	16.40	19 43
10/19/2004	1956	21060	62760	31700	11.85	981
19/19/2004	1560	23780	57960	34 200	17.1	10.60
10/19/2004	1581	21000	(D.160	75000	14 6%	9,16
10/19/2004	1662	23520	\$2700	30160	15.00	9.43
10/19/2004	1563	23780	(200	35860	17,78	11,12
10/19/2004	1584	21000	82008	30548	15 47	9 67
10/19/2004	1566	23520	16204	32680	15 34	10 21
10/19/2004	1586	23/m)	55720	31940	18 87	9 98
10/10/2004	1987	21080	5570#	34640	17 32	10 63
10/10/2004	1500	23520	62040	28520	14 26	8.01
10/19/2004	1559	23760	56820	35040	17,52	10.95
10/10/2004	1970	31000	\$4790	33720	16 MA	10.34
10/19/2004	1571	23520	54920	31400	15,7	9 81
10/19/7004	1572	22700	\$7900	34080	17,04	10.05
10/18/2004	1573	21060 23520	53780 55500	32720	16 36	10.23
10/10/2004	1574	23520 23780	\$5500 \$0140	\$1000 35360	15.09	9,90
10/19/2004 10/18/2004	1575	27/40 21050	52380	31300	17.00	11,01
10/19/2004	1676 1577	21090	127300 £8860	35000	15 69 17,54	8.76
10/19/2004	1977	21/ED 21060	52548	31480	15,34	10 P6
16/19/2004	1579	23520	470	31480	10,74	
19/19/2004	1540	23780 23780	57740	33460	17:63 16:73	11.02
18/19/2004	1581	21060	57120	36160	18,08	10,46 11,30
10/19/2004	1582	23520	(740)	34280	17,14	10,71
10/19/2004	1543	24040	64100	40060	20,03	12.52
10/19/2004	1534	23780	68300	34520	67,26	10.70
10/19/2004	1996	21080	84600	33540	16,77	10.44
10/19/2004	1580	23520	30100	32000	18 44	10.29
19/19/2004	15A2	27/80	55820	32040	10 02	10 01
10/18/2004	199	21060	64400	33400	18,7	10 44
10/19/2004	1589 1588	23620	\$4300	30780	15.39	9 62
10/19/2004	1500	23790	68940	35160	17.58	10 99
10/10/7004	1591	21000	81540	30460	19 20	0 50
10/19/2004	1902	27420	E92+0	35720	17.80	11.18
10/19/2004	1593	23520	56120	32600	16.3	10,19
10/10/2004	1594	23780	58400	34980	17,30	10 84
10/18/2004	1903	21000	<b>64 100</b>	33040	46.52	10.33
10/19/2004	1596	23520	64860	31360	15,68	9 80
10/19/2004	1587	21000	1000	38600	17.6	11.13
10/12/2004	1000	23760	58290	34500	17.25	10.79
10/10/2004	1539	23520	51920	21400	15.7	981
19110/2004	1000	31000	MAD SEC	34020 35480 29200	17 Q1	10 60
10/19/2004	1001	23/ <b>4</b> 0	56260	35460	(7,74	11.00
18/18/2004	1002	23520	52720	29200	(4.0	9,13
49/19/2004	1003	31000	64360	37300	10 65	1041
10/19/2004	1000)4	23780	55460	31660	(5.64	9.90
10/19/2004	1005	31886 23780	62980 60360	31620	15.61	969
10/19/2004 10/19/2004	1406	23790 21990	60360 \$3020	30000	(8.5	11.44
	1807	21900 23620				0 99
10/19/2004	1606 1800	23780 23780	19420 65548	35900 31760	17.96 15.00	11,22° 9:63
10/19/2004	1810	21060	67648	31760	15 開	11,43
10/19/2004	1611	23520	65779	31740	15 97	11,43 992
10/19/2004	1817	237 <b>8</b> 0	59±20	39940	17,82	11,14
19/19/2004	1613	21000	\$1280	32200	16.1	10,14
16/19/2004	1614	23780	<b>69740</b>	35200	17 da	11.24
18/19/2004	1818	21000	53750	32700	16.35	10 22
10/10/2004	1818	23790	56840	33060	16.53	10 25
19/19/2004	1617	21000	67000	30940	1847	9.67
10/18/2004	1010	22520	53400	75680	14,94	934
10/19/2004	1618	\$3786	50540	32760	16.36	10.24
10*19/2004	1620	21000	10000	Z9740	10 87	9.29
10/19/2004	1621	27530	62700	29180	14 59	0.13
10/19/2004	1622	23780	<b>59140</b>	12960	16 20	10.21
10/19/2004	1623	31060	52040	30983	13.49	3.04
10/10/2004	1424	23520	52800	29460	14,73	B.21
10/19/2004	1025	23780	60790	17000	14.6	10,66
10/19/2004	1629	21000	13900	32920	18.44	10.79
10/19/2004	1027	22570	63548	25020	H \$1	\$07
10/10/2004	1828	23780	95000	31300	15 65	8.78
10/19/2004	1629	21000	80380	29320	14.66	2.10
10/10/2004	1670	2000	84320	30000	16.4	9.63

Deta	Taphat P	Ten	Green	Mari Mari	Toma	EY.
10/20/2004	1631	7gra 23520	55440	31020	15.96	9.0
10/20/2004	1632	23760	59020	25740	17.62	81.0
10/20/2004	1633	21060	\$50,00	38040	18 92	11.6
10/20/2004	1634	23520	65420	31900	15.98	9.0
10/20/2004	1835	23760 21060	54 940 54 940	30420	15 31 M 54	9.5 40.1
10/20/2004	1637	23520	56340	33880 34820	1741	10.5
10/20/2004	1030	23320	60200	36470	18 21	113
10/20/7004	1579	21060	65860	34820	17.41	10.6
10/20/2004	1648	23780	59500	35720	17.86	11,1
10/70/2004	1641	21069	13000	X7040	18.97	70 e
10/20/2004	1642	23520	56400	32880	18 44	10.2
10/20/2004	1643	23780	90960 \$6700	17200	1782	11.1
10/20/2004	1845	2 1060 235 20	57140	35640 33030	18 31	10.5
10/20/2004	1848	23760	\$4200	34420	17.21	10.7
10/20/2004	1647	21089	32960	31880	15,0	9.0
t0/20/2004	1848	23570	\$2990 69840	36120	400	P1,2
(0/20/2004	1649	23780	60760	37900	18,6	61.5
10/20/2004	1650	21080	57720	36880	18 33	11,4
10/20/2004	1651	231420	58640	36 120	17.56	10.5
10/20/2004	1053	23760	61 180 F00 e6	37450	18,7	100
10/20/2004	1853	21080 23520	59346 \$4860	3600 31140	e9.14 16.67	11,1 6,1
10/30/7004	1655	23/60	58120	34340	17.17	10.
10/20/2004	1050	21060	55240	34100	17.00	10.1
10/20/2004	1657	23520	\$8460	32960	10.49	10.
10/20/2004	1658	23760	<b>90320</b>	36540	18.27	11,4
10/20/2004	1650	21060	58940	35,600	97.86	113
10/20/2004	1860 1861	23520	65540	32040	10.03	164
10/20/2004	1861	23760 21060	62900	30020 37500	10.51 18.73	12 11.3
10/20/2004	1002	23520	50580 50400	34880	17.44	10:1
10/20/2004	1882 1883 1884	2320	60760	37000	18.5	143
10/20/2004	ARCS.	21060	67020	35960	17.00	110
10/20/2004	9666 9667	22700	62620	36840	19.42	12.
10/20/2004	M47	21080 23780	58400	37340	10.07	114
10/20/2004	*663	23780	60280	35500 35740	10,3	19.
10/20/2004	1669 8870	21000 23520	50000 57720		17.07	11.
10/20/2004	1671	23780	58740	34700 34960	17.1 17.40	10:1
10/20/2004	1072	21000	54700	35700	17.05	10,
10/20/2004	1873	23520	\$7170	34206	17,1	10.0
10/20/2004	1874	23780	56740	34960	1749	10.
10/20/2009	1675	23520	40(60	30640	18.35	11,
10/20/2004	1670	237,00	68780	35000	17.6	10.
10/20/2004	1677 1678	23520 23780	\$8620 57920	35100 34140	17.84	10;
10/20/2004	1679	23520	62020	32400	17.07	44.
10/20/7004	1690	23780	61020	37240	16.62	11,
10/20/2004	1691	23620	65200	3100	13.84	9:
10/20/2004	1682	23780	<b>61460</b>	37680	15.84	11,
10/20/7004	1683	23520	55740	32220	18.11	10
10/20/2004	1994	23780	60340	3650	13.23	11,
10/20/2004	1695 1696	20520 20780	64260	30740	15 37	0; 10;
10/20/2004 10/20/2004	1687	23620	61920 67760	32140 34240	18.67	10.
10/20/2004	1007	23780	60320	36540	10 27	11,
	1446	20520	57040	33520	16.70	10.
10/20/2004					19.00	
10/20/2004 10/20/2004	1689	23780	61900	38120		110
10/20/7004	1091	23780 23670	57840	34320	17,10	10,
19/20/7094 19/20/2004 19/20/2004	1001	23780 23670 23760	57840 60080	34320 36300	17,16	10, 11,
10/20/7004 10/20/2004 10/20/2004 10/20/2004	1001	23780 27670 23780 23520	57640 60080 55560	34320 36300 32000	17,18 18,15 16,05	10, 11, 10,
10/20/2004 10/20/2004 10/20/2004 10/20/2004 10/20/2004	1001	23780 27670 23780 23520 23780	57640 60080 55560 56600	34320 36300 32060 36070	17,16 18,15 16,03 18,01	18, 18, 18, 18,
10/20/2004 10/20/2004 10/20/2004 10/20/2004 10/20/2004 10/20/2004	1691 1692 1693 1694	20780 20870 20780 20520 20780 20780	57640 60080 55560 56600 55760	34320 36300 32000 36070 31266	17,18 18,15 1605 1801 1613	10, 11, 10, 11,
10/20/2004 10/20/2004 10/20/2004 10/20/2004 10/20/2004 10/20/2004	1691 1692 1693 1694	23780 23620 23780 23780 23780 23780 23780	57840 60080 55560 56600 55760 61600	34320 36300 32000 36020 31266 37820	17,16 18,15 1603 1801 16 13 1881	10, 14, 16, 14, 14,
19/20/2004 19/20/2004 19/20/2004 19/20/2004 19/20/2004 19/20/2004 19/20/2004 19/20/2004	1691 1692 1693 1694	20780 20870 20780 20520 20780 20780	57640 60080 55560 56600 55760	34320 36300 32000 36070 31266	17,18 18,15 1605 1801 1613	10, 11, 10) 11, 10,
19/20/2004 19/20/2004 19/20/2004 19/20/2004 19/20/2004 19/20/2004 19/20/2004 19/20/2004	1691 1692 1693 1694	20780 20780 20780 20780 20780 20780 20780 20780 20780 20780	57840 60080 53560 53560 53760 61600 57800 56220 \$6520	34320 36300 32000 32000 34070 51296 37120 34060 34440 30000	17,16 18,15 1603 1801 16 13 1801 17 04 17,22 16 \$	10; 11; 10; 11; 11; 10; 10;
19/20/7094 19/20/2004 19/20/2004 19/20/2004 19/20/2004 19/20/2004 19/20/2004 19/20/2004 19/20/2004	1691 1692 1693 1694 1695 1697 1699 1699 1699	2710 2750 2750 2750 2750 2750 2750 2750 275	57840 60080 55500 55760 61600 57800 56220 86820	34320 36300 32000 34070 51208 37120 34000 34440 33340	17,10 10,15 1605 1901 1613 1704 1722 163 1767	10; 10; 10; 10; 10; 10; 10; 10;
19/20/2004 19/20/2004 19/20/2004 19/20/2004 19/20/2004 19/20/2004 19/20/2004 19/20/2004	1691 1692 1693 1694	20780 20780 20780 20780 20780 20780 20780 20780 20780 20780	57840 60080 53560 53560 53760 61600 57800 56220 \$6520	34320 36300 32000 32000 34070 51296 37120 34060 34440 30000	17,16 18,15 1603 1801 16 13 1801 17 04 17,22 16 \$	10:1 10:1 10:1 10:1 10:1 10:1 10:1 11:1

02/17/004	_	Thillier S		Head Infor	Her	Tens	- EV
\$22   \$25	Arte riske		Tere	Gross GNS20			70.31
## ## ## ## ## ## ## ## ## ## ## ## ##	0.711.700m						10.34
19-21   19-22   19-2							10.47
1972   1972							11.55
02/1/2004							9 58
1002117004   10024   21530   85000   32290   18. M   10. M							9.30
1997   1998							
1971/19704   19287   23330   56880   20189   16 59   10 10 10 17 19704   19705   1984   23730   25850   24 59   25 5							10.00
1021   1002							1240
100111901							10 36
1921   1929						18.40	12.16
103717004   10387   20520   57400   33890   69 94   90.     103717004   10390   27530   84100   31800   69 94   90.     103717004   10390   27530   84100   31800   69 94   90.     103717004   10390   27530   84100   31800   69.     103717004   10370   23530   67640   34120   17.00   60.     103717004   10371   23530   67640   34120   17.00   60.     103717004   10371   23530   68640   34120   17.00   60.     103717004   10371   23530   68640   34120   17.00   60.     103717004   10371   23530   68640   34500   17.60   60.     103717004   10371   23530   68640   34570   01.76   60.     103717004   10371   23530   68650   33700   17.60   60.     103717004   10377   27530   68760   33520   17.60   60.     103717004   10377   27530   68760   33520   17.60   60.     103717004   10377   27530   68760   33520   17.60   60.     103717004   10377   27530   68760   33520   17.60   60.     103717004   10378   23530   68760   33520   17.60   60.     103717004   10380   23530   68760   33540   17.60   60.     103717004   10380   23530   68760   33540   17.60   60.     103717004   10380   23530   68760   33540   17.60   60.     103717004   10380   23530   68760   33540   17.60   60.     103717004   10380   23530   68760   33540   17.60   60.     103717004   10380   23780   68760   33540   17.60   60.     103717004   10380   23780   68760   33540   17.60   60.     103717004   10380   23780   68780   33540   17.60   60.     103717004   10380   23780   68780   33540   17.60   60.     103717004   10380   23780   68780   33540   17.70   60.     103717004   10380   23780   68780   33540   17.70   60.     103717004   10380   23780   68780   33540   17.70   60.     103717004   10380   23780   68780   33540   17.70   60.     103717004   10380   23780   68780   33540   17.70   60.     103717004   10380   23780   68780   33540   17.70   60.     103717004   10380   23780   68780   33540   17.70   60.     103717004   10380   23780   68780   33540   17.70   60.     103717004   10380   23780   68780   33540   16.     103717004   10380	0/21/2004					15 95	# 97
1971/2004   19786   23780   87200   37500   16 73   11     1971/2004   19789   23520   84000   37500   16 73   11     1971/2004   19789   23520   84000   37500   16 73   11     1971/2004   19779   23780   66660   37500   16 9   17     1971/2004   19771   23520   86660   37500   16 9   17     1971/2004   19771   23520   86660   37500   17   58   17     1971/2004   19771   23520   86660   37500   17   58   17     1971/2004   19771   23520   86660   37500   17   18     1971/2004   19771   23520   86660   35700   17   68   17     1971/2004   19771   23780   86660   35700   17   68   17     1971/2004   19771   23780   86600   35500   17   68   17     1971/2004   19771   23780   86600   35500   17   68   17     1971/2004   19771   23780   86700   34620   17   68   17     1971/2004   19771   23780   86700   34620   17   68   17     1971/2004   19781   23780   86700   34620   17   68   17     1971/2004   19781   23780   86700   34620   17   68   17     1971/2004   19781   23780   86700   34620   17   68   17     1971/2004   19782   23780   86700   34620   17   68   17     1971/2004   19782   23780   86700   34600   18   17     1971/2004   19782   23780   86700   34600   18   17     1971/2004   19782   23780   86700   34600   18   17     1971/2004   19782   23780   86700   33800   10     1971/2004   19782   23780   86700   33800   10     1971/2004   19782   23780   86700   33800   10     1971/2004   19780   23780   86700   33800   10     1971/2004   19780   23780   86700   33800   10     1971/2004   19780   23780   86700   33800   10     1971/2004   19780   23780   86700   33800   17     1971/2004   19780   23780   86700   33800   17     1971/2004   19780   23780   86700   33800   17     1971/2004   19780   23780   86700   33800   17     1971/2004   19780   23780   86700   33800   17     1971/2004   19780   23780   86700   33800   17     1971/2004   19780   23780   86700   33800   17     1971/2004   19780   23780   86700   33800   10     1971/2004   19780   23780   86700   33800   17     1971/2004   19780   23780   86	0/21/2004	10266	25760	£1000	37220	1361	11 63
1927   1920   1928   25520   54500   31200   15.64   81.70   1927   1928   19	W71/7004	10,757	23520	57400	33890	16 94	10.50
1977/2004   10/2009   275.50   54.60   31.80   11.6.60   81.1077/2004   10/2009   275.50   64.60   31.80   11.6.60   81.1077/2004   10/2009   275.50   64.60   31.80   11.7.00   10/2009   10/2004   10/2009   275.50   66.60   31.80   17.50   10/2009   10/2004   10/21   275.50   66.60   31.80   17.50   10/2009   10/21   275.50   66.60   31.80   17.50   10/2004   10/21   275.50   65.60   66.60   36.60   17.50   10/2004   10/21   275.50   65.60   36.60   17.50   10/2004   10/21   275.50   65.60   30.50   17.60   16.60   16.60   17.60   10/2004   10/21   275.50   65.60   30.50   17.60   16.60	0/21/2004	10298	25760	#1280	37500	16 73	11,72
1877  (2004   16279   23760   60800   37290   18,4   91,1     1878  (2004   16272   23530   65860   37590   18,5   91,1     1878  (2004   16272   23780   65860   35460   17,5   31,1     1878  (2004   16272   23780   65860   35460   17,5   31,1     1878  (2004   16274   23780   65860   35740   17,7   68   81,1     1878  (2004   16274   23780   65860   35740   17,7   68   81,1     1878  (2004   16274   23780   65860   35740   17,7   68   81,1     1878  (2004   16274   23780   65860   35500   10,2   18     1878  (2004   16277   23280   65860   35500   10,2   18     1878  (2004   16278   23780   65860   35500   13,2   18     1878  (2004   16278   23780   65860   35500   13,2   18     1878  (2004   16278   23780   65860   36860   37740   18,4   10,1     1878  (2004   16278   23780   65860   36860   37740   18,4   10,1     1878  (2004   16280   23780   65860   36860   36860   18,0   11,1     1878  (2004   16280   23780   65860   36860   18,0   11,1     1878  (2004   16280   23780   65860   38780   18,0   11,1     1878  (2004   16280   23780   65860   38780   18,0   11,1     1878  (2004   16280   23780   65860   38780   18,0   11,1     1878  (2004   16280   23780   68600   38780   18,0   11,1     1878  (2004   16280   23780   68600   38790   18,0   18,0     1878  (2004   16280   23780   68600   38790   18,0   18,0     1878  (2004   16280   23780   68600   38790   18,0   18,0     1878  (2004   16280   23780   68600   38790   18,0   18,0     1878  (2004   16280   23780   68600   38790   18,0   18,0     1878  (2004   16280   23780   68600   38790   18,0   18,0     1878  (2004   16280   23780   68600   38790   18,0   18,0     1878  (2004   16280   23780   68600   38790   18,0   18,0     1878  (2004   16280   23780   68600   38600   18,0   18,0     1878  (2004   16280   23780   68600   38600   18,0   18,0     1878  (2004   16280   23830   68600   38600   18,0   18,0     1878  (2004   16280   23830   68600   38600   18,0   18,0     1878  (2004   16280   23830   68600   38600   18,0   18,0     1878  (2004   16280   23830	UZ 1/2004	10,759		54800	31200	15.64	9.78
1971-19704   1971   23.530   174-00   34.730   17.00   19.00							11.60
1021/10204   00272   22780   18840   33140   17,58   101001/10204   00273   22530   18440   35740   17,58   101001/10204   10273   22530   18440   35740   17,18   101001/10204   10274   22780   88540   35780   35780   17,18   11,18   11,18   12							10,68
10G717004 60273 21550 56100 34470 (7,31 80.16717004 10274 20204 69540 37570 (7,68 80.16717004 10274 20204 69540 37570 (7,68 80.16717004 10274 20204 69540 37570 (7,68 80.16717004 10274 20204 20							10.90
162717004   16274   23760   89540   35740   17, 68   81, 176717004   16276   23550   55500   20500   18, 10   19, 100717004   18276   23550   55500   20500   18, 10   19, 100717004   18277   23750   69580   35500   17, 68   19, 100717004   18277   23750   56040   35520   12, 28   19, 100717004   18277   23760   56500   35520   12, 28   19, 100717004   18278   23780   56520   31740   18, 17, 68   10, 100717004   18278   23780   69580   30738   18, 20   11, 100717004   18288   23780   69580   30738   18, 20   11, 100717004   18288   23780   69580   30738   18, 20   11, 100717004   18288   23780   69580   30738   18, 20   11, 100717004   18288   23780   69580   30738   18, 20   11, 100717004   18288   23780   69580   30738   18, 20   11, 100717004   18288   23780   69580   33540   17, 67   18, 20   18,							10.02
102710004 18276 23530 25500 20000 18.10 50 19. 102710004 10277 23530 60100 20000 18.10 60 19. 102710004 10277 23530 60100 20530 18.10 16.0 19. 102710004 10277 23530 60100 20530 18.20 17.0 19. 102710004 10277 23530 60100 21700 20000 18.0 19. 102710004 10270 23700 60100 21700 20000 19. 102710004 10200 23530 65500 21740 (6.67 0.0. 102710004 10200 23500 65500 21740 18.20 19. 102710004 10200 23500 65500 21740 18.0 19. 102710004 10200 23500 65500 21740 18.0 19. 102710004 10200 23500 65500 20000 19. 102710004 10200 23500 65500 20000 19. 102710004 10200 23500 65500 20000 19. 102710004 10200 23500 65500 20000 19. 102710004 10200 23500 65500 20000 19. 102710004 10200 23500 65500 20000 19. 102710004 10200 23700 65700 30000 19. 102710004 10200 23700 65700 30000 19. 102710004 10200 23700 65700 30000 19. 102710004 10200 23700 65700 30000 19. 102710004 10200 23700 65700 30000 19. 102710004 10200 23700 65700 30000 19. 102710004 10200 23700 65700 30000 19. 102710004 10200 23700 65700 30000 19. 102710004 10200 23500 65700 30000 19. 102710004 10200 23500 65700 30000 19. 102710004 10200 23500 65700 30000 19. 102710004 10200 23500 65700 30000 19. 102710004 10200 23500 65700 30000 19. 102710004 10200 23500 65700 30000 19. 102710004 10200 23500 65700 30000 19. 102710004 10200 23500 65700 30000 19. 102710004 10200 23500 65700							61,18
1002110004 10277 25250 69380 35380 17.69 11.769 11.							9.49
1002110004   10277   27530   50000   30520   14,28   8   1002110004   10278   27500   45700   34620   17,48   1   1002110004   10278   27500   45700   34620   17,48   1   1002110004   10278   27500   45700   34620   17,48   1   1   1   1   1   1   1   1   1							
10021/1004 10079 23780 84780 34620 17.48 10. 10021/2004 15029 23530 85280 37780 18.29 10. 10021/2004 15029 23530 85280 37780 18.30 11. 10021/2004 15029 23780 85280 37780 18.30 11. 10021/2004 15029 23780 85280 37780 18.30 11. 10021/2004 15029 23780 85280 38780 18.30 11. 10021/2004 15029 23780 85280 38780 18.30 11. 10021/2004 15029 23780 85280 38780 38780 18.21 11. 10021/2004 15029 23780 85280 38780 38780 18.30 11. 10021/2004 15029 23780 85280 38780 18.00 18.00 18. 10021/2004 15029 23780 85280 38780 38780 18.00 18. 10021/2004 15029 23780 85280 38780 38780 18.30 18. 10021/2004 15029 23780 85280 38780 38780 18.30 19. 10021/2004 15029 23780 85280 38780 38780 17.97 18. 10021/2004 15029 23780 85280 38780 38780 17.97 18. 10021/2004 15029 23780 85280 38780 38780 17.77 18. 10021/2004 15029 23780 85280 38780 38780 17.77 18. 10021/2004 15020 23780 85280 38780 17.77 18. 10021/2004 15020 23780 85280 38780 18.00 17.77 18. 10021/2004 15020 23780 85280 38780 17.77 18. 10021/2004 15020 23780 85280 38780 18.00 17.78 18. 10021/2004 15020 23780 85480 38780 17.78 18. 10021/2004 15020 23780 86480 38780 17.78 18. 10021/2004 15030 23780 86480 38780 17.78 18. 10021/2004 15030 23780 86480 38780 17.78 18. 10021/2004 15030 23780 86480 38780 17.78 18. 10021/2004 15030 23780 86480 38780 17.78 18. 10021/2004 15030 23780 86480 38780 17.78 18. 10021/2004 15030 23780 86480 38780 17.78 18. 10021/2004 15030 23780 86480 38780 17.78 18. 10021/2004 15030 23780 86480 38780 17.78 18. 10021/2004 15030 23780 86480 38780 17.78 18. 10021/2004 15030 23820 86480 38780 18.00 17.00 18. 10021/2004 15030 23820 86480 38780 18.00 17.00 18. 10021/2004 15030 23820 86480 38780 18.00 17.00 18. 10021/2004 15030 23820 86480 38780 18.00 18.00 18. 10021/2004 15030 23820 86480 38780 18.00 18.00 18.00 18. 10021/2004 15030 23820 86480 38780 18.00 18.00 18.00 18. 10021/2004 15030 23820 86480 38780 18.00 18.00 18.00 18. 10021/2004 15030 23820 86480 38780 38780 18.00 18.00 18. 10021/2004 15030 23820 86480 38780 38780 18.00 18. 10021/2004 15030 23820 86480 38780 38780 18.00 18.							11,05
Magnetista   Mag							9 54
MOZYJEDOM         \$12000         \$27700         \$9560         \$39780         \$1,20         \$1,00           MOZYJEDOM         \$12000         \$27700         \$9560         \$39780         \$16,20         \$1,00           MOZYJEDOM         \$10000         \$28000         \$38000         \$38000         \$16,00         \$1,00           MOZYJEDOM         \$10000         \$28000         \$38000         \$38000         \$38000         \$10,00         \$1,00							10.01
							9.92
1921   1920   1920   23780   1920   23780   1920							11,49
NGP127004   10283   20283   95100   31500   15,79   8,7007127004   10284   20280   95128   33540   17,67   8,7007127004   10284   20280   20280   30080   18,04   8,8007127004   10285   20280   20280   20280   20280   18,04   8,8007127004   10285   20280   20280   20280   20280   15,15   8,8007127004   10286   20280   20280   20280   20280   4,870   19,50   10,25							10,42
102741/2004   10284   23780   69742   333400   17.67   19.6097/2004   10284   23530   33800   30000   18.00   19.00   18.00	0/21/2004		22760			10.21	11,38
1007+1004   12285   23350   23800   30000   10.04	0.31/2004		23520				0.07
1829-1920-1   1829-1   25790   46-160   38790   16.36   18.3	0/21/2004	10794	23790	GP 128		17.67	11.04
102117304   10287   21530   20200   30300   15,15   8, 16	0/21/2004	10286	23520	53400	3000	18.04	9.40
1921   1924   12780   1889   13590   17 99   16	0/21/2004	10256		60480	39700	18.38	11.47
1971    1970	0/21/2004	10287	23530	\$3620	30300	15.15	8.47
##   ##   ##   ##   ##   ##   ##   #					35160		16,99
1972    1972    1972    1973					33540		19,48
## ## ## ## ## ## ## ## ## ## ## ## ##							11.64
##927-7004         19290         22780         \$9200         24620         17.74         19.85           ##927-7004         18284         22780         89400         35400         17.84         11.76           ##927-7004         ##928         2820         89400         35400         17.84         11.76           ##927-7004         ##928         ##929         89400         35400         17.84         11.77         18.76           ##927-7004         ##928         ##929         ##929         38400         18.24         12.77         19.77         18.24         12.77         19.77							9.29
00271/2004         19205         25520         44460         30640         15 47         B.           00271/2004         18204         22700         6940         17 86         17 16         00271/2004         18204         22700         6940         18 40         17 16         10071/2004         18207         22700         69400         18 24         17 16         10071/2004         18 297         22700         69400         18 24         10         10         10071/2004         10 17 17         16         10071/2004         10 18         10 18         10 <td></td> <td></td> <td></td> <td></td> <td></td> <td></td> <td>11.07</td>							11.07
1971/2004   18784   27780   89461   35800   17.84							8.67
DOT 170004         18265         2550         6750         34700         17         18:           DOT 170004         18267         2780         6250         3840         19:4         18:           MOTATOROM         18267         2780         18846         33320         10:89         10:89           MOTATOROM         18200         22530         68760         23720         16:62         19:10           MOTATOROM         18301         22780         69740         33220         16:62         19:10           MOTATOROM         18301         22780         69740         33220         16:61         10:10           MOTATOROM         18301         22780         69740         33220         16:61         10:10           MOTATOROM         18301         22780         69740         33220         16:61         10:10           MOTATOROM         18302         22459         80400         35520         17.78         11.           MOTATOROM         18305         22762         80400         25520         17.78         11.           MOTATOROM         18005         22762         80400         22600         16:19         18.           MOTATOROM				92000			
1003112004 18207 27780 02220 38450 18.24 12. 1071212004 15202 25230 88450 18.24 12. 1071212004 15202 25230 88450 18.24 18. 1071212004 15202 25230 88450 18.24 18. 1071212004 15202 25230 88700 27700 18. 1071212004 15203 27780 88700 27780 18.22 18. 1071212004 15203 27780 88700 27800 18.22 18. 1071212004 15203 27780 88700 27800 18.22 18. 1071212004 15203 27780 88700 27800 18.20 18. 1071212004 15203 27800 88700 27800 18.20 18. 1071212004 15203 27800 88700 27800 18. 1071212004 15203 27800 88700 27800 18. 1071212004 15203 27800 88700 27800 18. 1071212004 15203 27800 88700 27800 18. 1071212004 15203 27800 88700 27800 18. 1071212004 15203 27800 88700 27800 18. 1071212004 15203 27800 88700 27800 18. 1071212004 15203 27800 88700 27800 18. 1071212004 15203 27800 88700 27800 18. 1071212004 15203 27800 88700 27800 18. 1071212004 15203 27800 88700 27800 18. 1071212004 15203 27800 88500 27800 18. 1071212004 15203 27800 88500 27800 18. 1071212004 15203 27800 88500 37800 18. 1071212004 15203 27800 88500 37800 18. 1071212004 15203 27800 88500 37800 18. 1071212004 15203 27800 88500 37800 18. 1071212004 15203 27800 88500 37800 17.45 18. 1071212004 15314 25550 8870 38800 17.45 18. 1071212004 15314 25550 8870 38800 17.45 18.							
1974/2004   1970							18.43
							1203
MC191004   MC109   M							10.41
1002110004 19331 27700 00340 38490 18.25 18.25 19.00710004 19307 2550 98740 3820 98.61 19.00710004 19312 2550 98740 3820 98.61 19.00710004 19312 2550 98740 38200 17.6 19.00710014 19312 27700 27700 27700 27700 19520 17.6 12.007170004 19320 27700 27700 27700 27700 19520 17.6 19.007170004 19320 27700 27700 27700 27700 19520 27700 27700 27700 27700 27700 27700 19520 27700 19520 27700 19520 27700 19520 27700 19520 27700 19520 27700 19520 27700 19520 27700 19520 27700 19520 27700 19520 27700 19520 27700 19520 27700 19520 19500 19520 19500 19520 19500 19520 19500 19520 19500 19520 19500 1							11.50
IODY10004   SUSY2							10.30
16271-2004   10330   20780   20780   20000   16.6   12.	0/21/2004	19301	23780				11,39
109712004   103323   22780   22780   20000   18,8   12,1     1097127034   103324   23552   89640   35523   17,8     1097127034   10332   23782   89640   35523   17,8     1097127034   10332   23782   89640   35523   17,8     1097127034   10332   23523   55823   30000   16,1     1097127034   10332   23523   55823   32540   17,5     1097127034   10332   23523   55823   32540   16,1     1097127034   10332   23523   23523   32523   16,1     1097127034   10332   23523   23523   32523   16,1     1097127034   10332   23523   23523   32523   16,1     1097127034   10332   23523   35523   33524   16,2     1097127034   10332   23523   35523   33523   16,1     1097127034   10332   23523   35523   33523   16,1     1097127034   10332   23523   35523   33523   16,2     1097127034   10332   23523   35523   33523   16,2     1097127034   10332   23523   35523   33523   16,2     1097127034   10332   23523   35523   34623   17,4     1097127034   10334   23523   56523   34623   17,4     1097127034   10334   23523   56623   366	0/21/2004	10302	23520	(8740		10.01	10.36
1021/17094 10204 20109 10040 35520 17.76 11.1021/17094 10305 27730 40400 35520 17.76 11.1021/17094 10305 27730 40400 35520 40.31 1021/17094 10305 27330 40400 40530 40.31 1021/17094 10300 25520 55520 50720 50720 40.14 10.1021/17094 10300 25520 55520 27290 40.14 10.1021/17094 10300 25520 55520 27290 40.14 10.1021/17094 10300 25520 6778 20040 16.12 10.1021/17094 10310 25520 6778 20040 16.12 10.1021/17094 10310 25520 50720 50740 16.72 16.12 10.1021/17094 10314 25520 50720 50740 16.72 16.72 10.121/17094 10314 25520 50740 10.121 10.121/17094 10314 25520 50740 10.121 10.121/17094 10314 25520 50740 10.121 10.121/17094 10314 25520 50740 10.121 10.121/17094 10314 25520 50740 10.121 10.121/17094 10314 25520 50740 50740 10.121 10.121/17094 10314 25520 50740 50740 10.121 10.121/17094 10314 25520 50740 50740 10.121 10.121/17094 10314 25520 50740 50740 10.121 10.121/17094 10314 25520 50740 50740 10.121 10.121/17094 10314 25520 50740 50740 50740 10.121 10.121/17094 10314 25520 50740 50740 50740 10.121 10.121/17094 10314 25520 50740 50740 50740 10.121 10.121/17094 10314 25520 50740 50740 50740 10.121 10.121/17094 10314 25520 50740 50740 50740 10.121 10.121/17094 10314 25520 50740 50740 50740 10.121 10.121/17094 10314 25520 50740 50740 50740 10.121 10.121/17094 10314 25520 50740 50		10303		62780	30000	10.8	12.10
10921-10004   103305   23782   40400   38000   48.31   11.   11.   11.   11.   12.   12.   13.							11,10
1071/10704   20300							11.44
102120004   10397   23760   66720   35140   17.57   10.     107212004   10300   35550   55400   33250   10.     107212004   10300   25550   55400   33250   10.     107212004   10300   25550   55700   30240   16.     107212004   10310   25550   55700   30240   16.     107212004   10310   25550   56700   30240   16.     107212004   10312   23550   56550   33240   16.     107212004   10314   25550   5670   34800   17.45   18.     107212004   10314   25550   56650   30240   16.     10314   30314   35550   56650   30240   16.     10314   30314   35550   56650   30240   16.							147
10211-10204   10300   23520   55800   32200   10,14   10,10021-10204   1							10.89
IUD210094   10396   23785   1910   33390   45.16   40.   10010747004   10310   2850   28786   20240   16.17   16.17   17.   1001747004   10314   2350   26786   30245   16.17   11.   1001747004   10314   2350   2660   30245   16.27   10.   1001747004   10314   2350   26786   2360   24800   17.45   18.75   1001747004   10314   2350   5680   30240   10314   2350   5680   30240   10314   2350   36800   30240   10314   2350   36800   30240   30240   10314   2350   36800   3024							10.00
1091/1004 10310 25550 6778 50240 16.12 8.1091/1004 10011 25150 6778 50240 16.12 8.1091/1004 10011 25150 67240 76.74 91.67 10011/1004 10011 25150 5656 33040 16.52 10.091/1004 10011 25150 6724 25150 6724 34050 17.75 10011/1004 10314 25150 6724 34050 17.45 18.75 10011/1004 10314 25150 6724 34050 17.45 18.75 10011/1004 10314 25150 6724 34050 17.45 18.75 10011/1004 10314 25150 6725 6725 10011/1005 10.15							19.12
1022122004 (0011 32780 61240 37460 16.73 11, 1022127004 10312 23520 66560 33040 16.52 10, 1022127004 10313 23780 61244 37460 18.73 11, 1022127004 10314 23520 66620 3460 17.45 18.73 11, 1022127004 10314 23520 66620 34600 17.45 18.73 11, 1022127004 10314 23520 66620 34600 17.45 18.73 11, 1022127004 10314 10314 11, 1022127004 10314 10314 11, 1022127004 10314 11, 1022127004							
10/21/2004 10312 22520 56500 33040 16.62 10. 10/21/2004 10310 23780 61240 37400 18.73 18. 10/21/2004 10314 23520 56420 34000 17.5 18. 10/21/2004 10314 23520 56620 32(00 16.05 16.							9.45
107/1/2064 10313 23786 81249 37460 18.73 18. 107/1/2004 16344 23520 50470 34000 17.45 18. 10/21/2004 16316 23520 68620 32100 16.05 18.							19,71
10721/2004 16314 25520 52478 34500 177.45 187. 10721/2004 16316 25520 65620 32100 16.05 16.							10.33
10/21/3004 18318 23520 88620 32100 16.05 16.							11.71
							18,81
	0/21/2004		23520				16,03
(UPZ)(2000 HL)(7 ZZZB) 62/00 30020 18:45 12.	0/21/2004	10317	23740	es rea	20070	18,48	12.18
(0/21/200) 10313 23525 55940 33320 18 65 10	021/2004	10318	23620	66940	33320	11 6	10,41

ì	Dete	Ticket #_	7	Pilear Indige Grows	medan Med	Teme	CY
ľ	(0/22/2004	(6219	21780	413ED	37900	19.0	11.75
1	10/22/2004	(0329	23520	64240	34720	17.24	10.81
ı	10/22/2004	10321	23790	42440	38660	19.33	12.05
	10/22/2004	10322 10323	23520 23780	67980 S0180	35320	17.22	10.76
	10/22/2004	10320	Z3520	56140	32620	10.31	10,19
	10/22/2004	60.75	23780	64520	40740	20.37	12,73
	10/22/2004	10329	23520	50540	36020	18.01	11.26
	10/22/2004	(0327	23780	<b>60</b> 120	36340	10 17	11 36
	10/52/5004	19320	23A20 23780	\$7660	34440 27520	17.22	10.75
	10/22/2004	1037B 10330	23700 23520	41300 62940	3/3/0 29420	18.76 10,71	11.73 B 49
	10/22/2004	10331	73/780	41/80	37540	18 19	11.87
	10/22/2004	10332	21520	54700	31240	19 62	p 74
	10/22/2004	10333	23740	67740	33990	16 96	16,61
	10/22/2004	10334	23760	68630 63500	3484B 32440	17 42	18.80
	10/22/2004	99335 99336	21000 23700	E1740	37880	18 22 18 18	10, 14 14,86
	10/22/2004	60137	23786	58,220	34440	17 22	10.76
	10/22/2004	10330	21000	54100	23100	10 54	10.34
	10/72/2004	10339	20700	17100	34100	17.03	10.6
	19/22/2004	10540	21060	55446	34380 31780	17 19	10.74
	10/22/2004	10341	23525 23780	\$4300 \$9320	35540	15.00 17.77	#:#1 17,11
	10/22/1004	10343	23528	65700	32180	10 00	10.00
	10/22/2004	10344	23710	<b>40</b> 240	36460	10 23	11 36
	10/22/2004	10345	23570	52626	20000	14 65	<b>9.10</b>
	10/22/2004	10346	23740	61620	37840 30840	15 42	11,63
	10/22/2004 10/22/2004	10347	2352 <del>8</del> 23780	60120	36340	10.47	9 64
	10/22/2004	10348	20780	<b>9720</b>	35940	17.97	11.2
	10/22/2004	16358	23520	52940	25420	14.71	\$.15
	10/22/2004	10351	20780	59200	35430	17.71	11.07
	10/22/2004	10352	23520 23760	69420 64420	32900 40640	(6,45 20,33	10 20
	10/22/2004	10353	23520	65200	3(580	15.84	9.90
	10/22/2004	10354	23780	67540	36800	18.4	12.13
	10/22/2004	10058	235.20	68160	34540	17.32	10 60
	10/22/2004	10357	23780	60229	36440 32060	10 22	11 35
	10/72/2004	10350	23520 23780		22060 28600	10.0	10.02
ŀ	10/72/2004	16360	23520	64700	31150	14.50	974
۱	10/22/2004	10361	23766	64496	40620	20.31	12.0
	10/22/2004	10362	23570	64520	31000	15.5	0.00
ı	10/22/2004	10363	23780 23520	60000 66600	34220 32040	18.11	16.32
ĺ	10/22/2004	10364	23160	50000 50000	36220	18.02	10 01
ı	10/23/2004	18366	23430	84260	39790	15.39	9.6
	10/22/2004	10367	23760	69220	25440	(7.72	11.0
	10/22/2004	10368	23520	\$7 <b>4</b> (0)	23910	16,87	10 0
	10/22/2004	10345	23700 23520	68400 56400	34620 32880	17.31	10.6
	10/72/7004 10/22/2004	10370	23160 23750	36400 56440	32860	16.44 16.33	10.21
ı	19/22/2004	10375	23120	54000	32160	16.58	10.3
	10/22/2004	10376	23720	<b>60530</b>	38740	19.37	91,44
	10/22/2004	10377	23528	52300	267(6)	14 39	8.50
	10/22/2004	10370	23730 23520	60020 65600	36240 32140	18.12	11.35 10.04
	18/22/3004 18/22/3004	10379 10360	23/80 23/80	\$3600) 58020	35140	60.67 68.67	11.2
	10/22/2004	10361	23520	55900	32360	10,19	10.12
	10/22/2004	10302	23790	Gas 7403	35000	17.60	11.2
	10/22/2004	16363	21529	56700	33180	14.10	10.31
	10/22/2004	16364	23790 23520	54000 64000	34220 34480	17 F1 17.24	10 di 10.71
ı	10/22/2004 10/22/2014	16365	2778	G2540	34100	17.24	12,10
						-0.00	

Tetalo 1837140 2846140 2200040 1154.02 75130

Tetal- 1739120 4252000 2504200 125216 70230

Tendo 1897900 4264300 2556520 (270.20 780.01)

Temb 1478040 2554960 2119020 1009.00 457.48

Total 100000 7770440 224000 1424.44 702.78

Grand Total, Week of 16 October 2004 1000L01 300L000

TABLE G-6

#### Summary of Imported Clean Backfill From Remp Sand end Gravel BHSF Libby Yard Response Action 2004 Week of 25 October 2004

Description   Description	e Net	T desp
	100 35260	17.64
	EDD 26020	19.01
1075/7004 10705 23700 63640 40060 2010 12.52] 19/25/2004 10453 23520 64	160 34660	17.43
	060 38580	16,14
	240 33720 040 33260	18 42
10/25/2004 90353 235:20 66580 33160 16.68 10.36 10/25/2004 10450 23780 67 10/25/2004 00394 23780 33880 34080 17.04 10.65 10/25/2004 10457 23780 61	400 27620	18 61
10/25/2004 10/25 23520 56800 22280 16 14 00 00 19/26/2004 10456 22520 M	160 32660	16,33
10/75/2004 10384 23780 57240 33460 18.73 10.46 19/76/2004 10439 23780 6	460 37700	18 65
	940 35420	17,71
	540 34760 680 35160	17 36 17 56
10/25/2004 10/30 23523 66720 33200 10.50 10.20/20004 10462 23520 54 10/25/2004 10400 23730 41600 37620 18.91 11.02 10/25/2004 10463 23780 65	080 36300	19 (5
16/25/2004 10461 23526 53700 20100 15:00 9:43 80/26/2004 10464 23520 6	020 17500	18,79
10/25/2004 10402 23789 57969 34009 17.64 10.65 10/29/2004 10/65 23780 52	100 pg 100	15.05
	806 33200	15 64
	965 35160 866 30760	17.50 16.64
10/25/2004 (DOME 21779) 60040 36260 18.13 11.33 10/26/2004 (DME) 23780 56	000 34300	17,15
10/25/2004 10407 275/20 \$4400 30940 15.47 8.67 10/26/2004 10470 235/20 60	040 36520	10 26
LG/25/2004 LGHGE 23/80 61580 37/80 18/80 11.81   HG/25/2004 10471 23/80 50	360 35560	17 19
	580 34060 226 34440	17 (A) 17 22
1907257000 10411 23700 60360 36500 10 20 11,43 10070/2004 10474 23520 SI	526 35000	175
10/25/2004 10/12 22520 57880 34140 17,07 10 67 10/24/2004 1047% 23780 54	366 34560	17.29
10/25/2004 10413 23780 61320 37540 10.77 11,73 10/20/2004 10470 23520 50 10/25/2004 10414 22520 57500 33560 10,70 10.40 10/25/2004 10477 27520 5	060 31560 800 70060	15.70
	900 25000 1020 25540	14 04 12 77
	SM 30060	15.00
10/25/2004 10417 23780 60000 36260 18,14 11.34 16/26/2004 10460 23780 \$	120 20340	14,17
	10580 1079 29580	15.29 94.70
	1040 70000 1044 79250	14.79 14.60
	1000 31040	15 97
10/25/2004 10422 23520 53580 30080 15,03 9.39 (0/76/2004 10488 23520 6	950 27440	19.72
	000 34000 100 31400	17 15 7
	1120 25500	133
	120 33050	10.53
(0/25/2004 10427 25520 85780 33340 1649 10.39 (0/26/2004 10490 23780 \$	120 27340	13.67
10/25/2004 10438 23780 07120 23340 16.67 10.42 10/26/2004 10491 23330 6	626 29300	14 <b>15</b>
	680 31620 1000 33220	18,81 16,61
	580 MS20	17.28
10/25/2004 15422 23785 60340 35680 17.78 11.14 10/26/2004 10496 23620 6	D20 79800	14,9
	MID 32626	1631
	9020 34980 3000 25780	17.46 14.89
	840 24920	12.44
10/25/2004 10437 22520 55530 32000 10 10:00 10/75/2004 10500 23780 8	180 32400	182
	5500 31980	15 89
1975/2004 00439 23530 66300 31760 6569 6.50 (4629/2004 67602 21869 4 1075/2004 10440 23760 61360 37600 18.8 11.75 (1076/2004 67603 28620 4	9000 <b>2404</b> 0 920 24000	19.47 10.6
	9020 24900 1280 27220	13.81
10/25/2084 t0442 23780 60640 30680 10.43 11.52 10/25/2004 10505 23620 6	34360	18.16
10/25/2004 10443 23520 57400 23600 16.00 10.00 (0/25/2004 10500 23/60 6	\$\$30 31740	15 67
10725/2004 10444 27700 58140 35300 17.00 11.05 10/28/2004 10507 21000 4 10725/2004 10445 27520 58240 34720 17.30 10.05 10/28/2004 10500 25020 4	740 75000	12.84
	1980 22949 1240 30739	15.36
	200 35429	17.71
10/25/2004 10440 22780 01740 27800 10.00 11.00 10/25/2004 10511 21050 4	240 24160	12.00
	2940	14.75
	M00 22380 5780 32000	11,79
	EMEL 25420	12.90
10/28/2004 10510 23520 a	79140	14,57
10/26/2004 10517 25020 4	700- 24880	12,34
	9600 31820 960 25400	1591 12.7
10/26/2004 10530 21530 5	1730 31700 1730 31700	150
10/26/2004 18621 25020 4	MAD 21960	(0:00
19/25/2001 105/22 21090 4	1740 27580	13.84
	1120 34340 5340 31430	17:17 15:81

		,	Week of	25 Octob	er 2004		
			De Beller	(files) Pallon	Third is n		=
EV 19.21	Dete 10/27/2004	Ticket # 10525	Yare 23760	Garage Ea780	25000	T <del>erral</del> 17,8	10.94
11.03	10/27/2004	10524	23780	54220	30440	15,22	0.50
17,60	10/27/2004	10627	25020	49900	20080	10.44	6.63
10.63	10/27/2004	10529 10529	23780 25020	58040 48640	34 260 23620	67,13 81,84	10.71
10.54	10/27/2004	10530	23780	57240	23460	16 73	10.40
10.39	10/27/2004	10531	25020	46720	21700	10 65	6.79
11.76	10/27/2004	10532	23/80	91740	37960	10.90	11,90
18,21 11,78	10/27/2004	10533	25020 23780	46260 56480	21240 34700	10.63 17.35	10.64
11 07	10/27/2004	10535	25020	46020	73000	11,5	7.10
10 60	10/27/2004	10536	23780	\$8380	34600	(7.2	10 91
10.99	10/27/2004	40537 10538	25020 23700	49826	24900	(24	7,75
11.72	10/27/2004	10530	25020	67480 49400	33700 24380	16 85 12 19	7.62
11.20	10/27/2004	10540	23780	61700	37920	10,90	11,65
10 40.	10/27/2004	10541	26020	43580	18540	0.27	6.76
9 48	10/27/2004	10542	23780 25020	57240 495 <b>80</b>	20450 20560	16.73 19.20	10 45 8.43
10,72	10/27/2004	10544	23780	47580	36500	18,45	11.63
11,41	10/27/2004	10545	2502D	45140	20120	10,00	4 29
(1 12 (0 64	10/27/2004	10546	23790	55640 47480	32000	16,03	10.03
10.78	10/27/2004	10547 10548	25020 23784	47480	22440 34960	11,22	10,63
10 94	10/27/2004	10549	25020	48640	234ZD	11.70	7,35
10 61	10/27/2004	10550 10581	23780	58100	34320	17,18	10.73
9 05 8 78	10/27/2004	10562	25020 23786	47460	22440 34000	11.22	7.01
7,94	10/27/2004	10553	25020	42626	17800	6.6	6.56
1 39	10/33/3004	10554	Z3780	58480	34700	17.75	10,64
9.86 9.25	10/27/2004	10556	25020 237m)	64 160 57420	18180 33640	9 44	10.51
2.74	10/27/2004	10557	25020	49720	24700	12.39	7,72
₱ 14	(0/27/2004	10558	23760	50580	35800	17,0	11.00
1.50	10/27/2004	10550	260,70 23,780	45240 40270	20320	40 M 48 17	6.36 11.42
10.63	10/27/2004	10581	25020	46200	23160	11,99	7.24
9.81	19/27/2004	(0562	23760	59520	35740	17.67	11.17
8.31 10.33	10/27/2004	10563 10564	25020 25700	52940 52160	27820 26360	19.91 14.18	8.60 8.67
8.54	102/1200	10304	(3/40	m2140	20,000	44,19	/
9.16							
8.86 10.36							
10.79							
# 31							
10.19							
Ø.31							
7.79							
10, 13 9,99							
0.42							
681							
8.51							
9.49 6.92							
8.03							
6.69							
9.60 11,07							
7.56							
0.21							
6.99 10 00 1							
8 10							
9 11							
7.71							
9 94 7 94							
9.75							
0.06							
8 65							
10.73							
•							

*	Thereas a	Ie*	Q+me		Terre	CY
10/29/2001	10665	20780	<b>@1240</b>	37460	16.73	\$1,71
10/20/2004	10599	25030	45300	20,340	10.17	43
10/29/2004	10567	23790	50040	35260	17.63	\$1.02
10/22/2004	10508	25020	42200	<b>47150</b>	8,50	1.37
10/28/7004	10589	2)780	69100	35320	17,66	11.0
10/28/2004	10670	25020	48420	27400	11.7	7,31
40/29/2009	10371	23780	(ASSE)	35700	17,6	11 00
10/29/2004	10572	25070	45840	20626	18.31	0.44
10/29/2004	10573	23700	65460	34700	17.35	10.54
19/29/2004	10574	75020	47820	22800	11.4	7,13
(0/29/2004)	10575	20/100	58440	34660	17.33	10.63
10/26/2004	10576	25025	46220	21200	10.4	443
10/28/2004	10677	Z3780	62040	34260	E9 13	11.5
10/25/2004	10576	25070	44600	19780	1.00	6.10
10/26/2004	10579	23780	59440	35480	17 63	10.14
10/26/2004	10500	25020	40040	21820	10.61	6.70
10/20/2004	10681	Z3790	002000	20020	14 51	15.3
10/20/2004	10483	25020	45400	20440	10.22	6.3
18/28/2004	1060	23780	(200)	32000	18 04	10 63
10/20/2004	10004	25020	48 160	21140	90 57	6.61
10/25/2004	10145	25020	48040	20020	10 46	6.54
18/28/2004	1844	29790	<b>606(3)</b>	37040	19 57	11,5
10/20/2004	10687	25030	48040	21920	10.06	6.65
19/20/2004	10600	23780	-	34520	19.26	10,41
10/20/2004	1000	25036	48740	27/70	41.00	7,41
10/28/2004	10680	23740	68700	34170	1744	15.81

			(Heuri Indian	мероп		
<del></del>	Ticket #	Yare	Chres 1	Med .	I .	CY
10/29/2004	1058 i	2)760	58540	32006	16.43	10.27
10/29/2004	10502	25500	4\$100	20608	10.3	0.44
10/29/2004	10583	22700	\$4300	30520	16.26	9.54
10/29/2004	10594	25,520	48500	23000	11,63	7.21
10/28/2004	10286	23780	20400	35620	17.81	11,13
10/29/2004	10596	25500	47920	22420	81.21	7.61
10/29/2004	10597	22700	40800	37020	00.51	11.57
10/29/2004	10500	25500	47700	22200	11.1	6.04
10/29/2004	10590	23760	6/820	34040	17.02	10.64
10/29/2004	10800	25500	47380	21680	10.04	0.64
10/29/2004	10601	23780	68320	35548	0.27	11.11
10/29/2004	10602	25500	45360	19060	993	6.21
		2378	65300	31520	15.79	
19/29/2004	10609					9.85
10/29/2004	10804	26500	45220	19720	9.00	6.16
10/29/2004	10606	23780	69400	34620	17.31	40,82
10/75/7004	10808	25500	47720	22220	[1,15	6.94
10/29/2004	10607	23790	\$7800	33820	18.91	10.57
10/25/2004	10008	25500	45260	18780	0.00	6.18
10/29/2004	10509	23780	81500	27729	1266	8.65
10/29/2004	10818	25500	44560	19050	0 53	6.96
10/29/2004	10011	23740	\$4200	30430	(5.2)	9.61
10/29/2004	10812	25500	45500	20000	10	6.26
10/29/2004	10813	23780	56790	32430	18.24	10.13
10/29/2004	10514	25600	42300	1(300	6.4	6.23
18/79/7004	10616	23780	54920	31148	15.57	9.77
10/29/2004	10616	26500	46070	10620	9.76	6,10
10/29/2004	10617	25500	47200	2+760	10.68	4.40
10/28/2004	10618	23780	69000	30020	16.01	11,25
18/28/2004	10016	26600	48390	22600	11.4	7.13
10/29/2004	10620	22700	60420	30640	18 32	11 45
10/29/2004	10621	25500	47900	22340	39.10	000
10/29/2004	10622	23760	55000	22120	18.08	10 04
10/25/2004	10673	25800	46900	21400	10.7	0.00
10/25/2004	10624	27780	\$324B	204ED	14,73	0.21
10/29/2004	10625	25500	10000	24580	12.29	7.60
10/29/2004	10620	21790	66306	34800	17.3	10.61
10/29/2004	10627	25500	45000	20460	60 Z3	0.20
10/29/2004	10628	23780	57320	33540	18,77	10.48
10/29/2004	10529	25500	46860	23360	11.00	7.30
10/29/2004	10130	25.500	50260	24760	12.50	7.74
10/20/2004	10631	25500	47400	21900	10.95	884
10/28/2004	10632	75.600	44360	20000	10.43	6.52
10/29/2004	10633	25500	44160	22940	11.33	7.00
10/29/2004	10634	25800	48540	23040	11.62	7.20
10/29/2004	10636	2000	400	2000	11.5	7.0
10/20/2004	10636	25600	450	24300	12.16	7.41
*******		اللاقد	-13040		142.16	'A''

1400000 3678000 2189500 1091731 664.39

174**6310 4082910 23**47250 (1773.64 733.53)

974780 2119190 1143428 \$71.71 357.22

604400 (38050) 735(60 387.98) 283.74)

Total = 1140320 2354360 (21+040 617.03 379.28)

Grand Total, Week of 25 October 2014 3814.75 2364.310

**TABLE G-7** 

#### Summary of Imported Clean Backfill From Remp Sand and Gravel **BNSF Libby Yard Response Action 2004** Week of 1 November 2004

Sub-Ballast Haul Information						
Date	Ticket#	Tare	Gross	Net	Tons	CY
11/1/2004	10637	25500	48440	22940	11.47	7.17
11/1/2004	10638	25500	47340	21840	10.92	6.83
11/1/2004	10639	25500	48580	23080	11.54	7.21
11/1/2004	10640	25500	48920	23420	11.71	7.32
11/1/2004	10641	25500	48740	23240	11.62	7.26
11/1/2004	10642	25500	49460	23960	11.98	7.49
11/1/2004	10643	25500	47220	21720	10.86	6.79
11/1/2004	10644	25500	50380	24880	12.44	7.78
11/1/2004	10645	25500	48340	22840	11.42	7.14
11/1/2004	10646	25500	49740	24240	12.12	7.58
11/1/2004	10647	25500	51200	25700	12.85	8.03
11/1/2004	10648	25500	50780	25280	12.64	7.90
11/1/2004	10649	25500	50640	25140	12.57	7.86
11/1/2004	10650	25500	50080	245 <b>80</b>	12.29	7.68
11/1/2004	10651	25500	49360	23860	11.93	7.46
	Total =	382500	739220	356720	178.36	111.48

178.36 111.48 Grand Total, Week of 1 November 2004

## **Appendix H**

Applicable or Relevant and Appropriate Requirements

#### APPENDIX H

## APPLICABLE OR RELEVANT AND APPROPRIATE REQUIREMENTS (ARARS) BNSF LIBBY RAILYARD RESPONSE ACTION 2004 BURLINGTON NORTHERN SANTA FE RAILWAY COMPANY LIBBY, MONTANA

Citation	Requirement or Activity	Compliance Strategy
29 CFR 1910.134	Use of respiratory protection.	<ul> <li>Each employer was responsible for compliance with this standard.</li> <li>Full-face PAPRs were used initially, with the possibility of downgrading to negative-pressure, half-face respirators.</li> </ul>
29 CFR 1910.134, 29 CFR 1926.95, 29 CFR 1926.96, 29 CFR 1926.100, 29 CFR 1926.101, 29 CFR 1926.102, 29 CFR 1926.103	Site work requires the use of personal protective equipment.	<ul> <li>Personal protective equipment was worn onsite at all times. The minimum personal protective equipment included a hard hat, safety glasses, and safety boots. This equipment complied with applicable ANSI standards.</li> <li>Additional personal protective equipment was required in the Contamination Reduction Zone and Exclusion Zone. This included respiratory protection, disposable suits, and protective gloves.</li> </ul>
29 CFR 1910.151(b)	If an infirmary, clinic, or hospital for treating injured employees is not within close driving distance to the workplace, a person or persons shall be adequately trained to render first aid. Adequate first aid supplies shall be readily available.	St John's Lutheran Hospital at 350 Louisiana Avenue in Libby, Montana, is less than 1 mile from the work areas. Therefore, this regulation is not applicable.

#### APPENDIX H

## APPLICABLE OR RELEVANT AND APPROPRIATE REQUIREMENTS (ARARS) BNSF LIBBY RAILYARD RESPONSE ACTION 2004 BURLINGTON NORTHERN SANTA FE RAILWAY COMPANY LIBBY, MONTANA

Citation	Requirement or Activity	Compliance Strategy
29 CFR 1926.1101 (29 CFR 1910.1001)	Worker protection measures to include engineering controls, worker training, labeling, respiratory protection, bagging of waste, 0.1 f/cc eight-hour time-weighted average and 1 f/cc 30-minute excursion permissible exposure limit.	<ul> <li>Requirements of these standards have been addressed in the project specification. Some of the worker protection measures are listed below.</li> <li>Engineering controls included keeping the soil wet and providing decontamination facilities for personnel and equipment.</li> <li>Workers were trained in accordance with federal asbestos abatement requirements before starting work at the site. Montana State certification is not required because the soils removal does not fit the definition of an asbestos project as defined by the Montana Department of Environmental Quality (MDEQ). A requirement of asbestos licensure is that they have proper training for their job designation.</li> <li>All excavated soils were loaded directly into dump trucks for transport to Lincoln County Landfill, north of Libby. The truck beds were tarpcovered prior to transport, and the truck beds were covered in transit both to and from the landfill.</li> <li>Signs and/or warning tape and traffic cones were used at the site perimeter to keep unauthorized personnel out of the site and Exclusion Zone.</li> <li>Waste generated from personal protective equipment and during decontamination was disposed of in asbestos warning-labeled 6-mil bags. The bags are to be leak-tight polyethylene bags labeled in accordance with 29 CFR 1910.1200(f) of OSHA's Hazard Communication standard.</li> <li>Respiratory protection and protective clothing were worn by personnel entering the Exclusion Zone.</li> <li>Worker breathing zone samples were collected from workers in the Exclusion Zone to document exposure. Additionally, area samples were collected at the Exclusion Zone perimeter. Decisions to upgrade respiratory protection were based on the airborne concentrations detected and the maximum use concentrations of the respirators being used.</li> </ul>
40 CFR 61.154	Disposal of asbestos-containing waste	Potential asbestos-containing material generated with the project was disposed of in a landfill operated by Lincoln County, Montana.

# APPENDIX H APPLICABLE OR RELEVANT AND APPROPRIATE REQUIREMENTS (ARARS) BNSF LIBBY RAILYARD RESPONSE ACTION 2004 BURLINGTON NORTHERN SANTA FE RAILWAY COMPANY LIBBY, MONTANA

Citation	Requirement or Activity	Compliance Strategy	
40 CFR Part 763.90	The removal project is completed after visible hydrated biotite has been removed and the soil samples do not detect Libby amphibole.	EMR collected soil samples to document Libby amphibole content of the soil following cleaning.	
42 CFR Part 84	Respirator filter selection	Although other filters may provide adequate protection, P100 have been specified in the EMR Work Plan.	
49 CFR parts 171 and 172	Regulates the transportation of asbestos-containing waste material. Requires waste containment and shipping papers.	A shipment record accompanied each shipment to the landfill.  Dump truck beds were covered with tarps for waste transportation; the truck beds were covered while traveling to and from the landfill	
American National Standard for High-Visibility Safety Apparel ANSI/ISEA 107-1999	Exposure to vehicular equipment at the site.	Class 2 garments were worn since they were intended for use in activities where greater visibility is necessary during inclement weather conditions or in work environments with risks that exceed those for Class 1.	
ARAR's for preventing damage to unique or sensitive areas, such as floodplains, historic places, wetlands, and fragile ecosystems, and for restricting other activities that are potentially harmful because of where they take place.	Site work	The project site is a BNSF Railroad Company right-of-way. Therefore, issues with respect to floodplains, historic places, wetlands, fragile ecosystems, or activities that may be potentially harmful are not applicable.	
Backup Alarm - citable under Section 5(a) (1) of the Occupational Safety and Health Act.	Under Section 5(a)(1) of the Occupational Safety and Health Act (the General Duty Clause), employers must keep their workplaces free from recognized hazards	Backup alarms on heavy equipment are required.	

#### APPENDIX H

## APPLICABLE OR RELEVANT AND APPROPRIATE REQUIREMENTS (ARARS) BNSF LIBBY RAILYARD RESPONSE ACTION 2004 BURLINGTON NORTHERN SANTA FE RAILWAY COMPANY LIBBY, MONTANA

Citation	Requirement or Activity	Compliance Strategy
Emission Control requirements of 40 CFR 61.145 and Waste handling provisions of 40 CFR 61.150	Prevent visible emissions during vacuuming, soil transfer, loading the soil into vessels for transfer to the landfill.	<ul> <li>Soils were wetted prior to handling and remained wet throughout handling so that no visible emissions were released from the site.</li> <li>Each truckload of soil was manifested using a special waste manifest. Photocopies of the manifests will be retained by Kennedy/Jenks Consultants and the originals will be supplied to BNSF for their records.</li> <li>Air sampling was conducted during loading and decontamination procedures in order to sample for potential airborne fibers.</li> </ul>
	Asbestos-containing waste transportation and disposal at the approved landfill.	<ul> <li>Kennedy/Jenks Consultants on behalf of BNSF and the transporter ensured that a waste shipment record was appropriately completed and signed by the generator, and accompanied the waste to the disposal site.</li> <li>A copy of the waste shipment record was provided to the landfill operator or owner.</li> <li>A copy signed by the landfill owner or operator is to be returned to BNSF within 30 days.</li> </ul>

# APPENDIX H APPLICABLE OR RELEVANT AND APPROPRIATE REQUIREMENTS (ARARS) BNSF LIBBY RAILYARD RESPONSE ACTION 2004 BURLINGTON NORTHERN SANTA FE RAILWAY COMPANY LIBBY, MONTANA

Citation	Requirement or Activity	Compliance Strategy		
29 Code of Federal Regulations 1910.145(d)(4)  Caution signs warning of asbestos- containing material and/or asbestos- related activity.  The perimet The posting (1) Be displ the legend. (2) Conform centimeter to of Federal F (3) Display		The posting must:  (1) Be displayed in such a manner and lot the legend.  (2) Conform to the requirements for twen centimeter by 35.56-centimeter] upright of Federal Regulations 1910.145(d)(4) at (3) Display the following legend in the lot	rimeter of the exclusion zone was posted with asbestos warning signs. sting must: displayed in such a manner and location that a person can easily read	
		Legend	Notation	
		DANGER ASBESTOS DUST HAZARD CANCER AND LUNG DISEASE HAZARD Authorized Personnel Only	2.5 cm [1 in.] Sans serif, Cothic, or Block. 2.5 cm [1 in.] Sans Serif, Cothic, or Block. 1.9 cm [3/4 in.] Sans Serif, Cothic, or Block. 14 Point Cothic	
Montana Title 75. Environmental Protection Chapter 2. Air Quality, Part 5. Asbestos Control	Montana Department of Environmental Quality (DEQ) asbestos-related regulations.	<ul> <li>Most of the Montana DEQ regulations are not applicable because the project does not involve asbestos-containing materials in building materials.</li> <li>A courtesy notification was sent to Montana DEQ, but a permit is not required since the waste materials are soils.</li> </ul>		